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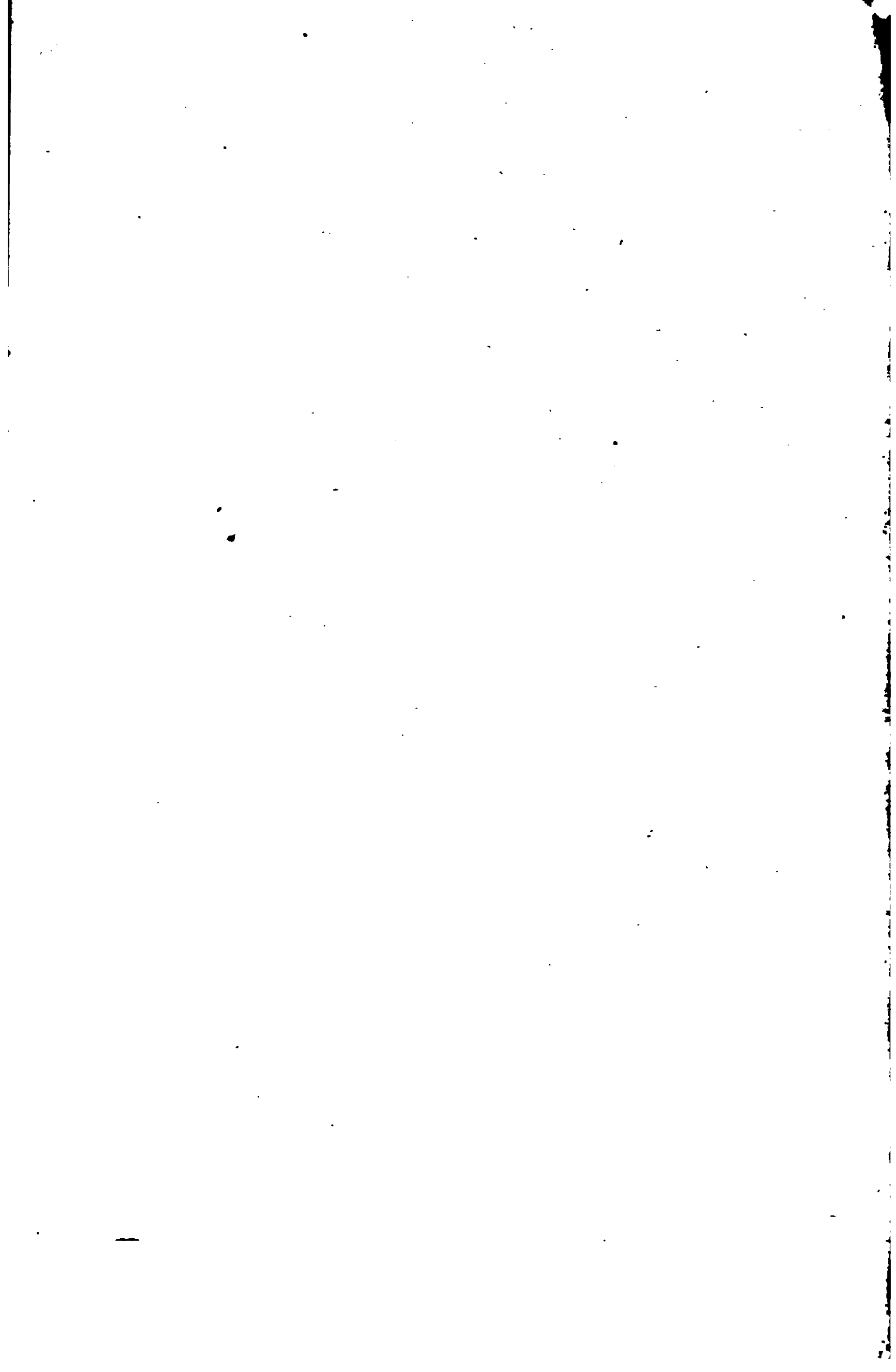
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BULLETIN OF THE STATE UNIVERSITY OF IOWA

New Series No. 125

May, 1906

CALENDAR

OF THE

STATE UNIVERSITY OF IOWA

IOWA CITY

1905-1906

PUBLISHED BY THE UNIVERSITY

IOWA CITY, IOWA

1906

THE UNIVERSITY BULLETINS PUBLISHED BY THE UNIVERSITY ARE ISSUED EVERY SIX WEEKS, DURING THE ACADEMIC YEAR, AT LEAST SIX NUMBERS EVERY CALENDAR YEAR. ENTERED AT THE POST OFFICE AS SECOND CLASS MAIL MATTER.

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THE
STATE UNIVERSITY OF IOWA
IOWA CITY

CALENDAR

1905-1906

PUBLISHED BY THE UNIVERSITY
IOWA CITY
1906

ORGANIZATION

The State University of Iowa embraces:

THE COLLEGE OF LIBERAL ARTS
THE COLLEGE OF LAW
THE COLLEGE OF MEDICINE
THE COLLEGE OF HOMEOPATHIC MEDICINE
THE COLLEGE OF DENTISTRY
THE COLLEGE OF PHARMACY
THE GRADUATE COLLEGE
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The College of Liberal Arts embraces:

GROUPS OF STUDIES LEADING TO THE DEGREES OF B. A. AND
B. S., AND ALSO OF B. A. AND LL. B., OF B. S. AND M. D.,
AND OF B. S. AND D. D. S.

The School of Political and Social Science, which includes:

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A FOUR YEARS' COURSE

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The College of Dentistry embraces:

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Special announcements giving full information concerning any of these colleges or schools will be sent to any address upon request. In writing mention the college or school in which you are particularly interested. Address

President GEORGE H. MACLEAN,
Iowa City, Iowa.

THE UNIVERSITY CALENDAR

1906-1907

1906

<i>June 8, Friday</i>	Anniversary exercises of the forensic societies, 8 P. M.
<i>June 10, Sunday</i>	Baccalaureate address, 4 P. M.
<i>June 11, Monday</i>	Class day exercises. Battalion drill and dress parade. Review by the Governor of Iowa, 4 P. M. Class play, 8 P. M.
<i>June 12, Tuesday</i>	Alumni day. Phi Beta Kappa address, 10 A. M. Alumni business meeting, 2 P. M. Alumni dinner, 6 P. M.
<i>June 13, Wednesday</i>	Commencement, all colleges, 10 A. M. President's reception, 4 P. M.
<i>June 14, 15, Thursday, Friday</i>	Examinations for admission to all colleges.
<i>June 16, Saturday</i>	Registration for the Summer Session, 9 A. M.
<i>June 18, Monday</i>	Instruction begins in the Summer Session, 7 A. M.
<i>July 26, 27, Thursday, Friday</i>	Examinations by the State Board of Educational Examiners.
<i>July 28, Saturday</i>	Summer Session ends.
	SUMMER VACATION.
<i>Sept. 17, Monday</i>	Examination for admission. Registration in all colleges, 2 P. M. Students may register by mail or in person at any time during the summer vacation.
<i>Sept. 19, Wednesday</i>	Instruction begins in all colleges, 8 A. M. University convocation; address by the President, 4 P. M.
<i>Nov. 17, Saturday</i>	First quarter ends, 10 P. M.
<i>Nov. 19, Monday</i>	Second quarter begins, 8 A. M.
<i>Nov. 29, Thursday</i>	Thanksgiving Day, all exercises suspended.
<i>Dec. 20, Thursday</i>	Holiday recess begins, 10 P. M.

1907

<i>Jan. 3, Thursday</i>	Work resumed in all colleges, 8 A. M.
<i>Feb. 2, Saturday</i>	First semester ends, 10 P. M.
<i>Feb. 4, Monday</i>	Second semester begins, 8 A. M.
<i>Feb. 21, Thursday</i>	Annual lecture of the Sigma Xi, 8 P. M.
<i>Feb. 22, Friday</i>	Washington's Birthday; University convocation. All other exercises suspended.
<i>April 13, Saturday</i>	Third quarter ends, 10 P. M.
<i>April 15, Monday</i>	Fourth quarter begins, 8 A. M.
<i>May 30, Thursday</i>	Memorial Day; all exercises suspended.
<i>June 7, Friday</i>	Anniversary exercises of the forensic societies, 8 P. M.
<i>June 9, Sunday</i>	Baccalaureate address, 4 P. M.
<i>June 10, Monday</i>	Class Day exercises. Battalion drill and dress parade. Review by the Governor of Iowa, 4 P. M. Class play, 8 P. M.
<i>June 11, Tuesday</i>	Alumni day. Phi Beta Kappa address, 10 A. M. Alumni business meeting, 2 P. M. Alumni dinner, 6 P. M.
<i>June 12, Wednesday</i>	Commencement, all colleges, 10 A. M. President's reception, 4 P. M.
<i>June 13, 14, Thursday, Friday</i>	Examinations for admission to all colleges.
<i>June 15, Saturday</i>	Registration for the Summer Session, 9 A. M.
<i>June 17, Monday</i>	Instruction begins in the Summer Session, 7 A. M.
<i>July 25, 26, Thursday, Friday</i>	Examinations by the state board of educational examiners.
<i>July 27, Saturday</i>	Summer Session ends.
	SUMMER VACATION.
<i>Sept. 16, Monday</i>	Examinations for admission. Registration in all colleges, 2 P. M. Students may register by mail or in person at any time during the summer vacation.
<i>Sept. 18, Wednesday</i>	Instruction begins in all colleges, 8 A. M. University convocation; address by the President, 4 P. M.

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PUBLICATIONS—Professors Macbride, the President, Professors Loos, Becker, Gilbert, Wilson, Flom, Guthe, Ohle.

SECONDARY SCHOOLS AND ENTRANCE EXAMINATIONS—Professors Calvin, Bolton, Shimek, Wilder, Dorcas, Ensign.

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CHARLES CLEVELAND NUTTING, M. A., Curator of the Museum of Natural History.

BOHUMIL SHIMEK, M. S., Curator of the Herbarium.

PUBLIC LECTURES

1904.

Jan. 14, Edda, "Asmund Olafsen Vinje, Norwegian Poet,"
Mr. B. L. Wick, Cedar Rapids, Iowa.

Feb. 3, Baconian, "The Geological History of the Rhine
Valley and its Relation to History and Scenery," (ill-
ustrated), Professor F. A. Wilder.

Feb. 6, "Porcelain Inlays," Dr. George W. Schwartz, Chi-
cago, Ill.

Feb. , Engineering Society, "Gold Dredging," Professor
Samuel Calvin.

Feb. 7, "The Making of Gold Fillings," Dr. J. V. Conzett,
Dubuque, Iowa.

Feb. 24, Baconian, "Some Examples of Concrete Steel
Structures," (illustrated), Professor C. S. Magowan.

Mar. 6, "Historical Evidence of the Resurrection of
Christ," Professor W. C. Wilcox.

Mar. 6, Department of Philosophy, "The Psychology of
Advertising," Dr. W. R. Clements.

Mar. 8, Department of Zoology, "The Colors of Animals,"
Professor C. C. Nutting.

Mar. 9, "Geology and Revelation," Professor Samuel Cal-
vin.

Mar. 10, Baconian, "Why Teeth Decay," Professor W. J.
Brady.

Mar. 15, Department of Zoology, "The Bottom of the Sea
and Its Inhabitants," Professor C. C. Nutting.

Mar. 17, Baconian, "Ferns in the Desert," (illustrated),
Professor Bohumil Shimek.

Mar. 22, Department of Zoology, "The Hawaiian Cruise of
the Albatross," Professor C. C. Nutting.

Mar. 24, Baconian, "The Evolution of the Gothic in Eng-
lish Architecture," Dr. J. G. Gilchrist.

Mar. 25, Archeological Institute, "The Ara Pacis of Au-

gustus," Professor James C. Egbert, Columbia University.

Mar. 26, Department of Philosophy, "The Permanently Significant in Kant's Theory of the Beautiful," Professor J. H. Tufts, University of Chicago.

Mar. 29, Department of Zoology, "The Salmon and Salmon Industries of Alaska," Professor C. C. Nutting.

Mar. 31, Baconian, "Star Dust," Professor L. G. Weld.

Apr. 5, Department of Zoology, "The Fur Seal of the Pribylof Islands," Professor C. C. Nutting.

Apr. 7, Baconian, "Insects—the Role They Play in the Transmission of Diseases," (illustrated), Professor Henry Albert.

Apr. 10, Department of Zoology, "The Social Life of Ants," Professor H. F. Wickham.

Apr. 16, "The French Revolution," Professor W. C. Wilcox.

Apr. 26, Department of Zoology, "Some Remarkable Habits of Spiders," Professor H. F. Wickham.

May 2, Department of Pathology, "Carcinoma of the Stomach," Professor Henry Albert.

May 3, Department of Zoology, "Nature's Balance; Parasites and Parasitism," Professor H. F. Wickham.

May 16, Department of Pathology, "Bacteria of Infection, Contagion and Decomposition," Professor Henry Albert.

June 24, Department of History, "Henry Clay, the Leader of the Whig Party," Professor W. C. Wilcox.

June 24, Department of Philosophy, "Dreams," Professor Carl E. Seashore.

June 28, Department of Education, "The High School Pupil: What He is and What He Needs," Professor Frank Webster Smith, University of Nebraska.

June 30, Department of Greek, "The Historical Significance of Recent Excavations in the Roman Forum," Professor Arthur Fairbanks.

July 1, Department of History, "Daniel Webster, the Expounder of the Constitution," Professor W. C. Wilcox.

July 1, Department of Philosophy, "Hypnotism," Professor Carl E. Seashore.

July 8, Department of History, "Stephen A. Douglas, the

Advocate of Squatter Sovereignty," Professor W. C. Wilcox.

July 8, Department of Philosophy, "Mediumship," Professor Carl E. Seashore.

July 12, Department of Latin, "A Day in Pompeii," Professor Potter.

July 15, Department of History, "Horace Greeley, the Prince of American Journalism," Professor W. C. Wilcox.

July 15, Department of Philosophy, "Mind Reading," Professor Carl E. Seashore.

July 18, Department of Geology, "The Great Ice Age in America," Professor Samuel Calvin.

July 22, Department of History, "Samuel J. Tilden, the Statesman of the Democratic Party," Professor W. C. Wilcox.

July 22, Department of Philosophy, "Suggestion," Professor Carl E. Seashore.

July 24, Department of Public Speaking, "The Power of the Nineteenth Century," Professor Henry E. Gordon.

July 25, Department of Geology, "The Great Ice Age in Iowa," Professor Samuel Calvin.

July 26, Department of English, "Canterbury Pilgrimage," Dr. James G. Gilchrist.

July 27, Department of Botany, "A Bit of Uncle Sam's Back Yard," Professor Bohumil Shimek.

Sept. 29, Baconian, "The Genesis of Malignant Tumors and Factors Favoring Recurrence," Dr. J. G. Gilchrist.

Oct. 4, Department of Philosophy, "The Christian Conception of Personality," Professor J. D. Stoops, Iowa College.

Oct. 11, Sigma Xi, "La Jolla," Professor C. C. Nutting.

Oct. 11, Department of History, "The Practical Side of Education," Professor W. C. Wilcox.

Oct. 13, Baconian, "Luther Burbank and His Gardens," (illustrated), Professor T. H. Macbride.

Oct. 20, Baconian, "Vulcanism and Associated Phenomena in the Yellowstone National Park," (illustrated), Professor Samuel Calvin.

Oct. 27, Baconian, "Do We Eat Too Much?" (illustrated), Professor E. W. Rockwood.

- Oct. 28, Lecture Bureau, Hahn Festival Orchestra.
- Oct. 30, Lecture Bureau, "Joys of the Trail," Hamlin Garland.
- Oct. 31, Department of Physical Training, "The Physical Department in a University," President George E. MacLean.
- Nov. 3, Baconian, "The Interest on One Cent and Some Mathematical Curiosities," Dr. E. L. Dodd.
- Nov. 4, "The Material Basis of the Christian Life," Professor W. C. Wilcox.
- Nov. 7, Department of Physical Training, "Exercises as a Vital Principle," Professor Gilbert L. Houser.
- Nov. 10, Baconian, "Arctic Colonies in the Rocky Mountains," Professor H. F. Wickham.
- Nov. 14, Department of Physical Training, "How and When to Exercise," Professor Gilbert L. Houser.
- Nov. 17, Baconian, "Why Are We Becoming a Race of Dyspeptics?" Professor W. L. Bierring.
- Nov. 20, Department of Philosophy, "The Scope of Philosophy," Dr. Paul Carus, Chicago, Ill.
- Nov. 21, Department of Physical Training, "How and When to Study," Professor F. E. Bolton.
- Nov. 24, Baconian, "Primary Causes of Animal Behavior," Professor Gilbert L. Houser.
- Nov. 28, Department of Physical Training, "How and when to Sleep and Eat," Professor J. T. McClintock.
- Dec. 1, Baconian, "Chemistry Boiled Down," Mr. C. D. Poore.
- Dec. 5, Department of Physical Training, "How and When to Avoid the Doctor's Services," Dr. F. W. Bailey.
- Dec. 6, Archeological Institute, "Roman Portrait Busts," Professor Walter Dennison, University of Michigan.
- Dec. 8, Baconian, "Color Vision in the Indirect Field," Professor C. E. Seashore.
- Dec. 12, Department of Physical Training, "How and When to Break Training," Dr. F. W. Bailey.
- Dec. 14, Lecture Bureau, Recital by Elias Day and Oranne Truitt Day.
- Dec. 15, Baconian, "Electric Power Transmission," Professor A. H. Ford.

Dec. 15, Edda, "Pioneer Church Work Among the Norwegians in America," President C. K. Preus, Luther College.

Dec. 19, Department of Physical Training, "Personal Hygiene," Dr. F. P. Lord.

1906.

Jan. 3, Department of Philosophy, "The Spread of Practice," Professor G. C. Fracker, Coe College.

Jan. 5, Baconian, "The Geology of the Apalachian Mountains and its Bearing on American History," (illustrated), Professor Frank A. Wilder.

Jan. 10, Department of Physical Training, "Types of Exercise—Their Effect," Mr. E. A. Rule.

Jan. 12, Baconian, "Forests of the United States," (illustrated), Professor Bohumil Shimek.

Jan. 18, Department of History, "The Mission of the Press," Professor W. C. Wilcox.

Jan. 18, Lecture Bureau, Recital, Earl R. Drake Concert Co.

Jan. 19, Baconian, "Extinguishing an Anthracite Mine Fire," (illustrated), Mr. C. L. Bryden.

Jan. 24, Department of Physical Training, "The Care of the Heart and Lungs," Professor W. L. Bierring.

Jan. 27, Department of Scandinavian, "Henry Ibsen: The Biographical Background of His Dramas," Professor George T. Flom.

Jan. 31, Department of Physical Training, "The Care of Bruises, Eprains and Open Wounds," Dr. Lord.

Feb. 2, Baconian, "Whistling and Speaking Electric Lights," (illustrated), Professor Karl E. Guthe.

Feb. 6, Department of Physical Training, "The Care of the Nerves," Dr.—

Feb. 13, Department of Physical Training, "Athletics in the Making of the Man," Mr. C. L. Bryden.

Feb. 15, Department of Philosophy, "Science," Professor T. H. Macbride.

Feb. 20, Department of Physical Training, "Mental Life as Affected by Physical Activity," Professor Carl E. Seashore.

- Feb. 27, Department of Physical Training, "The Significance of Physical Proportions," Mr. E. A. Rule.
- Mar. 1, Department of Philosophy, "Literature," Professor C. B. Wilson.
- Mar. 6, Department of Physical Training, "Racial Difference in Physical Proportions," Dr. D. J. H. Ward.
- Mar. 8, Department of Philosophy, "Art," Professor C. F. Ansley.
- Mar. 13, Department of Physical Training, "Form and Posture," Mr. E. A. Rule.
- Mar. 15, Department of Philosophy, "Religion," Professor Isaac A. Loos.
- Mar. 18, Department of Scandinavian, "Esaias Tegner," President Gustaf Andreen, Augustana College.
- March 20, Department of Physical Training, "Skin Diseases," Dr. J. B. Kessler.
- Mar. 21, Lecture Bureau, "Take the Sunney Side," Mr. Lou J. Beauchamp.
- Mar. 22, Department of Philosophy, "Social Life," Professor Arthur Fairbanks.
- Mar. 27, Department of Physical Training, "Venereal Diseases," Professor J. R. Guthrie.
- Mar. 27, "The Elder Edda; the Old Testament of the Teutons," Professor G. T. Flom.
- Mar. 29, Department of Philosophy, "Athletics," Professor A. G. Smith.
- Apr. 3, Department of Physical Training, "Disease Germs—How to Avoid Them," Dr. Henry Albert.
- Apr. 5, Department of Philosophy, "Mental Economy," Professor F. E. Bolton.
- Apr. 10, Department of Physical Training, "The Care of the Feet," Professor H. J. Prentiss.
- Apr. 17, Department of Physical Training, "Overwork and Underwork, Physically," Professor G. L. Houser.
- Apr. 19, Department of Philosophy, "Politics," Professor B. F. Shambaugh.
- Apr. 24, Department of Physical Training, "Overwork and Underwork, Mentally," Professor Seashore.
- Apr. 26, Department of Philosophy, "Morality," Dr. J. B. Miner.

May 7, Department of Scandinavian, "The Voluspa, a lay from the Elder Edda," Professor G. T. Flom.

May 14, Auspices of The Early English Society, "The Study of Old English," President George E. MacLean.

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New York.

Professor Emeritus of Materia Medica and Diseases of Chil-
dren in the College of Medicine, 1868. Clinton, Iowa

JOHN CLINTON SHRADER, M. D., 1865, Coll. Phys. and Sur.,
Keokuk; M. D., Long Island Coll. Hospital, Brook-
lyn, N. Y.; M. A., 1877; LL. D., 1894, Western Col-
lege.

Professor Emeritus of Obstetrics and Diseases of Women,
1869. 811 College St.

SAMUEL CALVIN, M. A., 1874; LL. D., 1904, Cornell College;
Ph. D., 1888, Lenox; F. G. S. A.

Professor and Head of the Department of Geology, 1874.
522 N. Clinton St. (108 Science Hall)

EMLIN MCCLAIN, B. Ph., 1871; B. A., 1872; LL. B., 1873; M.
A., 1882; LL. D., 1891, Iowa; LL. D., 1891 Findlay
College.

Honorary Professor of Jurisprudence, 1881. (Old Capitol)

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Mon-
mouth; Ph. D., 1895, Lenox.

Professor and Head of the Department of Botany, 1878.
728 Washington St. (206 Science Hall)

* Date following title indicates year of appointment to ser-
vice in the University. The names of the professors, instructors
and fellows are arranged in groups according to seniority of ap-
pointment to present rank.

*JAMES GRANT GILCHRIST, M. D., 1863; M. A., 1890, Pennsylvania.

Professor of Surgery and Surgical Gynecology, College of Homeopathic Medicine, 1882.
615 N. Dubuque St. (Homeopathic Hospital)

EMIL LOUIS BOERNER, PH. G., 1876, Philadelphia Coll. of Phar.; Phar. D., 1896, Iowa.

Professor Emeritus of Practical Pharmacy, 1885.
325 N. Dubuque St.

CHARLES HERBERT COGSWELL, M. D., 1866, Hahnemann College, Chicago.

Professor Emeritus of Obstetrics and Diseases of Women in the College of Homeopathic Medicine, 1885.
Cedar Rapids, Ia.

†GEORGE THOMAS WHITE PATRICK, B. A., 1878, Iowa; B. D., 1885, Yale; PH. D., 1888, Johns Hopkins.

Professor and head of the Department of Philosophy, 1887.
704 N. Dubuque St. (209 Liberal Arts)

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell University.

Professor and Head of the Department of German Language and Literature, 1888. 311 N. Capitol St. (101 Liberal Arts)

LAENAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor and Head of the Department of Mathematics, Dean of the Graduate College, 1886.
612 N. Dubuque St. (118 Liberal Arts)

CHARLES CLEVELAND NUTTING, B. A., 1880; M. A., 1882, Blackburn University.

Professor and Head of the Department of Zoology, and Curator of the Museum of Natural History, 1886.
922 E. Washington St. (304 Science Hall)

JAMES RENWICK GUTHRIE, B. S., 1878; M. A., 1881, Lenox; M. D., 1884, Iowa.

Professor of Obstetrics and Gynecology, and Dean of the College of Medicine, 1889.
Dubuque, Ia. (University Hospital)

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B. D., 1881, Yale; D. C. L., 1898, Penn Coll.

Professor and Head of the Department of Political Economy and Sociology and Director of the School of Political and Social Science, 1889.
11 E. Bloomington St. (205 Liberal Arts)

SAMUEL HAYES, B. S., 1869; M. S. 1876, Michigan; LL. B., 1891, Iowa.

Professor of Law, 1891.
616 N. Dubuque St. (201 Old Capitol)

* Died March 22, 1906.

† Absent with leave.

ELBERT WILLIAM ROCKWOOD, B. S., 1884; M. A., 1901, Amherst; M. D., 1895, Iowa; PH. D., 1904, Yale.

Professor and Head of the Department of Chemistry and Toxicology, 1888. 1011 Woodlawn. (Chemical Laboratory)

GEORGE ROYAL, M. D., 1882, N. Y. Hom. Med. Coll.

Professor of Materia Medica and Therapeutics, and Dean of the College of Homeopathic Medicine, 1892.
Des Moines, Iowa. (Hom. Hospital)

JAMES WILLIAM DALBEY, B. S., 1885; M. D., 1888, Illinois Coll.

Professor Emeritus of Ophthalmology in the College of Medicine, 1889. Cedar Rapids, Iowa

CHARLES SUMNER CHASE, B. A., 1871, Cedar Valley Sem.; B. S., 1874, I. S. C.; M. D., 1882, Rush Medical Coll.; M. A., 1895, Iowa.

Professor of Materia Medica and Therapeutics in the College of Medicine, 1892. Waterloo, Iowa.

WALTER LAWRENCE BIERRING, M. D., 1892, Iowa.

Professor of Theory and Practice and Clinical Medicine, Vice-Dean and Secretary of the Faculty, College of Medicine, 1898.
Cor. Governor St. and Iowa Ave. (Laboratory Hall)

WILLIAM CRAIG WILCOX, B. A., 1888; M. A. 1891, University of Rochester.

Head of the Department of History, and Professor of American History, 1894.
629 N. Dubuque St. (222 Liberal Arts)

FRANK THOMAS BREENE, D. D. S., 1883; M. D., 1893, Iowa.

Professor of Operative Dentistry, and Therapeutics, 1888.
419 N. Clinton St. (Dental Hall)

WILLIAM SUITS HOSFORD, B. A., 1883; D. D. S., 1892, Iowa.

Professor of Prosthetic Dentistry, Crown and Bridge Work, and Dean of the College of Dentistry, 1893.
505 College St. (1 Dental Hall)

GILBERT LOGAN HOUSER, B. S., 1891; M. S., 1892, Iowa; PH. D., 1901, Johns Hopkins.

Professor of Animal Biology and Director of the Zoological Laboratories, 1892. 430 Iowa Ave. (101 Science Hall)

BENJAMIN FRANKLIN SHAMBAUGH, B. PH., 1892; M. A., 1893, Iowa; PH. D., 1895, Pennsylvania.

Professor and Head of the Department of Political Science, 1895.
219 N. Clinton St. (202 Liberal Arts)

WILLIAM ROBERT WHITEIS, B. S., 1892; M. D., 1895; M. S., 1895, Iowa.

Professor of Obstetrics in the College of Medicine, 1898.
220 S. Johnson St.

LEE WALLACE DEAN, B. S., 1894; M. S., 1896; M. D., 1896, Iowa.

Professor of Ophthalmology, Otology, Rhinology and Laryngology, and Director of the University Hospital, 1898.
3 Bloom Terrace. (University Hospital)

ELMER ALMY WILCOX, B. A., 1891, Brown.

Professor of Law, Secretary of the University Senate, and Secretary of the Law Faculty, 1899.
1026 Washington St. (104 Old Capitol)

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor and Head of the Department of English, 1899.
1041 Woodlawn. (227 Liberal Arts)

LEONA ANGELINE CALL, B. A., 1880; M. A., 1883, Iowa.

Professor of Greek Language and Literature, 1885.
32 Bloomington St. (106 Liberal Arts)

THE REV. HENRY EVARTS GORDON, B. A., 1879; M. A., 1901, Amherst.

Professor of Public Speaking, 1900.
303 N. Capitol St. (312 Liberal Arts)

THE REV. ARTHUR FAIRBANKS, B. A., 1886, Dartmouth; Ph. D., 1890, Freiburg, I. B.

Professor of Greek Literature and Archeology, and Head of the Department of Greek; Secretary of the Graduate Faculty, 1900. 7 E. Bloomington St. (310 Liberal Arts)

FREDERICK ELMER BOLTON, B. S., 1893; M. S., 1896, Wisconsin; Ph. D., 1898, Clark.

Professor and Head of the Department of Education; Director of the Summer Session, 1900.
1019 College St. (217 Liberal Arts)

WILLIAM J. BRADY, D. D. S., 1886, Iowa.

Professor of Orthodontia, 1899.
1027 College St. (Dental Hall)

CHARLES NOBLE GREGORY, B. A., 1871; LL. B., 1872; M. A. 1876; LL. D., 1901, Wisconsin.

Professor of Law, and Dean of the College of Law, 1901.
227 N. Clinton St. (105 Old Capitol)

ERNEST ALBERT ROGERS, D. D. S., 1892; M. D., 1904, Iowa.

Professor of Regional Anatomy, and Clinical Dentistry, and Superintendent of Clinics, 1893.
West Side. (Hall of Dentistry)

BOHUMIL SHIMEK, C. E., 1883; M. S., 1902, Iowa.

Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium, 1890.
529 Brown St. (201 Science Hall)

FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Colgate.

Professor of Latin, 1895.
315 S. Dodge St. (111 Liberal Arts)

CARL EMIL SEASHORE, B. A., 1891, Gustavus Adolphus; PH. D., 1895, Yale.

Professor of Psychology, 1897.

204 Fairchild St. (211 Liberal Arts)

WILBER JOHN TEETERS, B. S., 1893; M. S., 1898, Mt. Union College; PH. C., 1895, Michigan.

Professor of Pharmacognosy, Director of the Pharmaceutical Laboratory, and Dean of the College of Pharmacy, 1895.

West Side. (Chemical Laboratory)

HARRY GRANT PLUM, B. PH., 1894; M. A., 1896, Iowa.

Professor of European History, 1900. (315 Liberal Arts)

WILLIAM JEPSON, M. D., 1886, Iowa; B. S., 1890, University of the Northwest; M. D., 1891, Jefferson Medical College; M. D., 1891, Pennsylvania; L. R. C. S., and L. R. C. P., Edinburgh, and L. R. C. P. and S., Glasgow, 1897.

Professor of Surgery in the College of Medicine, 1902.

Sioux City, Iowa (University Hospital)

HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.

Professor of Entomology, and Assistant Curator of the Museum of Natural History, 1894.

911 Iowa Ave. (303 Science Hall)

LAWRENCE MARSHALL BYERS, B. A., 1890, Penn College; M. A., 1891, Haverford; LL. B., 1893, Yale.

Professor of Law, 1903. 430 N. Clinton St. (202 Old Capitol)

FRANK ALONZO WILDER, B. A., 1892, Oberlin; PH. D., 1902, Chicago.

Professor of Petrology, Economic Geology and Mining, 1903.

603 N. Dubuque St. (106 Science Hall)

WILLIAM LE CLAIRE BYWATER, M. D., 1897, Iowa; O. et A. Chir., 1900, New York Ophthalmic.

Professor of Ophthalmology and Otology in the College of Homeopathic Medicine, Director of the Homeopathic Hospital, Vice-Dean and Secretary of the Faculty of the College of Homeopathic Medicine, 1900.

314 Church St. (Hom. Hospital)

BENJAMIN RICHARD JOHNSTON, M. D., 1893, Hering College, Chicago.

Professor of Theory and Practice, College of Homeopathic Medicine, 1900. Cedar Rapids, Iowa. (Hom. Hospital)

FREDERICK JACOB BECKER, M. D., 1886, Iowa; M. D., 1887, Hahnemann Med. College, Philadelphia.

Professor of Obstetrics and Gynecology, College of Homeopathic Medicine, 1902.

919 E. College St. (Hom. Hospital)

GEORGE VAN INGEN BROWN, D. D. S., 1881, Penn. College of Dental Surgery; M. D., 1895, Milwaukee Medical College; C. M., 1886, Milwaukee Medical College; B. A., 1899, Northern Illinois College.

Professor of Dental Pathology and Oral Surgery in the College of Dentistry, 1902. Milwaukee, Wis. (Dental Hall)

CHARLES SCOTT MAGOWAN, C. E., 1884; M. A., 1887, Iowa.

Professor of Municipal and Sanitary Engineering, 1886.
304 Summit St. (Engineering Hall)

ARTHUR GEORGE SMITH, B. PH., 1891; M. A., 1895, Iowa.

Professor of Physics and Mechanics, 1893.
West Side. (Hall of Physics)

JOHN GEORGE CHALMERS, B. A., 1901, Lafayette.

Professor and Director of Physical Training and Athletics, 1903.

JOHN THOMAS MCCLINTOCK, B. A., 1894, Parsons; M. D. 1898, Iowa.

Professor of Physiology in the Colleges of Medicine, 1897.
(Physiological Laboratory)

BARRY GILBERT, B. A., 1899, LL. B., 1901, Northwestern.

Professor of Law, 1903. 124 Church St. (204 Old Capitol)

WILLIAM ROLLA PATTERSON, B. DL., 1888; B. S., 1889, Iowa State Normal; B. PH., 1895, Iowa; PH. D., 1898, Pennsylvania.

Professor of Commerce and Statistics in the Department of Political Economy and Sociology, 1898.
505 Washington St. (209 Liberal Arts)

HENRY ALBERT, B. S., 1900; M. S., 1902; M. D., 1902, Iowa.

Professor of Pathology and Bacteriology, 1901.
620 Bowery St. (Laboratory Hall)

HENRY JAMES PRENTISS, M. E., 1889, Stevens Institute of Technology; M. D., 1898, Bellevue Hospital Medical College.

Professor of Anatomy and Histology, 1904
West Side. (Hall of Anatomy)

WILLIAM GALT RAYMOND, C. E., 1884; LL. D., 1905, Washington University.

Professor of Civil Engineering and Dean of the College of Applied Science, 1904.
606 S. Johnson St. (Hall of Engineering)

HORACE EMERSON DEEMER, LL. B., 1879; LL. D., 1904, Iowa.

Honorary Professor of Jurisprudence, 1899. (Old Capitol)

GEORGE T. FLOM, B. L., 1893, Wisconsin; M. A., 1894, Vanderbilt; Ph. D., 1899, Columbia.

Professor of Scandinavian Languages and Literatures, and
Acting Professor of English Philology, 1900.
609 Summit St. (10 Liberal Arts)

CHARLES WARREN WEEKS, B. S., 1898, State University of Nebraska; First Lieutenant 30th Infantry, U. S. A.

Professor of Military Science and Tactics and Commandant
of the Cadet Battalion, 1905. 6 Bloom Terrace (Armory)

ARTHUR HILLYER FORD, B. S., 1895; E. E., 1896, University of Wisconsin.

Professor and Head of the Department of Electrical Engineering, 1905.
2 Bloom Terrace (Electrical Engineering Hall)

KARL EUGEN GUTHE, Ph. D., 1892, Marburg.

Professor and Head of the Department of Physics, 1905.
707 N. Dubuque St. (Hall of Physics)

• **ERNEST LINWOOD OHLE, B. S., 1902; M. E., 1905, Case School of Applied Science.**

Acting Professor of Steam Engineering in Charge of the
Department of Mechanical Engineering, 1905.
230 Fairchild St. (Hall of Engineering)

FOREST CHESTER ENSIGN, B. PH., 1897; M. A., 1900, Iowa.

Acting Professor in Education and Inspector of High
Schools, 1905. 311 Ronalds St. (216 Liberal Arts)

FREDERICK BERNARD STURM, B. A., 1892, Michigan.

Assistant Professor of German, 1892. (102 Liberal Arts)

CLARENCE WILLIS EASTMAN, B. S., 1894, Worcester Polytechnic; M. A., Ph. D., 1898, Leipzig.

Assistant Professor of German, 1898.
225 Fairchild St. (102 Liberal Arts)

†**STEPHEN HAYES BUSH, B. A., 1901; M. A., 1902, Harvard.**

Assistant Professor of French, 1901.
127½ S. Dubuque St. (120 Liberal Arts)

ALBERTUS JOSEPH BURGE, B. S., 1897; M. S., 1899; M. D., 1900, Iowa.

Assistant Professor of Surgery, College of Medicine, 1901.
22½ S. Clinton St. (Hospital)

HERBERT CLIFFORD DORCAS, B. PH., 1895, Iowa; M. A., 1903, Columbia.

Assistant Professor of Education, University Examiner, and
Registrar, 1895. 429 Ronalds St. (108 Old Capitol)

CARL LEOPOLD VON ENDE, B. S., 1893, M. S., 1894, Iowa; PH. D., 1899, Goettingen.

Assistant Professor in Chemistry, 1899. (Chem. Lab'y)

WILLIAM JAY KARSLAKE, B. S., 1891; M. S., 1894, Lafayette; PH. D., 1905, Johns Hopkins.

Assistant Professor in Chemistry, 1904.
935 Iowa Ave. (Chemical Laboratory)

JAMES BURT MINER, B. S., 1897; LL. B., 1899; M. S., 1901, Minnesota; PH. D., 1903, Columbia.

Assistant Professor in Philosophy, 1904.
430 N. Gilbert St. (215 Liberal Arts)

HENRY LE DAUM, B. A., 1896; M. A., 1903, Ohio Wesleyan University; B. A., 1897, Harvard.

Assistant Professor in Charge of the Department of French Language and Literature, 1905.
411 S. Dubuque St. (119 Liberal Arts)

FREDERICK GOODSON HIGBEE, B. S., 1903, Case School of Applied Science.

Assistant Professor and Head of the Department of Descriptive Geometry and Drawing, 1905.
230 Fairchild St. (Hall of Engineering)

ALDEN ROBBINS HOOVER, B. S., 1902; M. D., 1905, Iowa.

Acting Assistant Professor of Histology and Embryology, 1901. (Laboratory Building)

JOSEPH JASPER MCCONNELL, B. A., 1876; B. DL., 1878; M. A. 1880, Iowa; LL. D., 1904, Coe College.

Lecturer on Education, 1891. Cedar Rapids, Iowa

JOHN BLAIR KESSLER, M. D., 1887, Iowa.

Lecturer and Clinical Instructor in Dermatology in the College of Medicine, 1899.
Cor. Clinton and Washington Sts.

GEORGE EDWARD DECKER, B. S., 1895; M. D., 1897, Iowa.

Lecturer on Pediatrics in the College of Medicine, 1900.
Davenport, Iowa

LUTHER ALBERTUS BREWER, B. A., 1883; M. A., 1886, Pennsylvania College.

Lecturer on Journalism, 1900. Cedar Rapids, Iowa

JENNINGS PRICE CRAWFORD, M. D., 1893, Iowa.

Lecturer on Surgical Technic, 1900. Davenport, Iowa

†Absent; in residence at Harvard.

THEODORE LINCOLN HAZARD, M. D., 1883, Michigan.

Lecturer on Pediatrics, College of Homeopathic Medicine,
1892. 114 Fairchild St. (Homeopathic Hospital)

**ROSCOE HENRY VOLLAND, M. D., 1899, I. S. N. S.; D. D. S.,
1902, M. D., 1905, Iowa.**

Lecturer on Operative Dentistry, 1902.

HORACE M. TOWNER, Corning, Iowa.

Lecturer on Law, 1904.

JAMES MOORHEAD, M. D., 1893, Iowa.

Lecturer and Assistant to the Department of Theory and
Practice, College of Homeopathic Medicine, 1903.
(Hom. Hospital)

HENRY MORROW, JR., D. D. S., 1897, Iowa.

Lecturer and Demonstrator of Prosthetic Dentistry,
College St. (Dental Hall)

**JOHN W. KIME, M. D., 1883, Iowa; M. D., 1889, Bellevue
Hospital Medical College.**

Special Lecturer on Tuberculosis in the College of Medicine,
1905. Fort Dodge, Iowa

**DUREN JAMES HENDERSON WARD, B. A., 1878; S. T. B., 1884,
Hillsdale College; M. A., 1883, Harvard; Ph. D.
1887, Leipzig.**

Lecturer in Anthropology, 1905.
228 N. Clinton St. (221 Liberal Arts)

CHARLES F. LORENZ, B. S., 1897; M. S., 1898, Iowa.

Instructor in Physics, 1900. West Side. (Hall of Physics)

SAM BERKLEY SLOAN, B. A., 1899, Nebraska.

Instructor in English, 1899.
506 N. Linn St. (118 Liberal Arts)

**FRANK EDWARD HOBACK, B. PH., 1897; M. A., 1899, Iowa;
Ph. D., 1902, Pennsylvania.**

Instructor in Political Science, 1902. (317 Liberal Arts)

**BYRON JAMES LAMBERT, B. D., 1896; M. D., 1897, Iowa
State Normal; B. Ph., 1900; B. S. in C. E., 1901,
Iowa.**

Instructor in Civil Engineering, 1902. (Engineering Hall)

**PERCIVAL HUNT, M. D., 1897, Iowa State Normal; B. A.
1900; M. A., 1904, Iowa.**

Instructor in English, 1900. (226 Liberal Arts)

ZADA MARY COOPER, Ph. G., 1897, Iowa.

Instructor in Pharmacy, 1897.

505 S. Dubuque St. (Pharmaceutical Laboratory)

ANFIN EGDAHL, B. S., 1900, Wisconsin; M. D., 1904, Johns Hopkins Medical School.

Instructor in Pathology and Bacteriology, 1904.

509 Jefferson St. (General Laboratory)

CHARLES LAZARUS BRYDON, E. M., 1902; B. S. in Chemistry, 1904, Lafayette College.

Instructor in Mining and Metallurgy, 1904.

(Chemical Laboratory)

EDWARD LEWIS DODD, B. A., 1897; M. A., 1901, Western Reserve University; M. A., 1902; Ph. D., 1904, Yale.

Instructor in Mathematics, 1904.

526 N. Linn St. (115 Liberal Arts)

CLARENCE VAN EPPS, B. S., 1894, Iowa State College; M. D., 1897, Iowa; M. D., 1898, Pennsylvania.

Instructor in Theory and Practice, 1904. 430 Jefferson St.

FREDERICK P. LORD, B. A., 1898; M. D., 1903, Dartmouth.

Demonstrator of Anatomy, 1904. (Hall of Anatomy)

WILLIAM EVERETT SPENCE, D. D. S., 1902, Iowa.

Demonstrator in Prosthetic Dentistry, 1904.

502 Iowa Ave. (Hall of Dentistry)

EDWARD A. RULE, B. S., 1904, Iowa.

Instructor in Physical Training, 1905. (Athletic Pavillion)

EDWIN FORD PIPER, B. A., 1897; M. A., 1900, Nebraska State University.

Instructor in English, 1905.

506 N. Linn St. (7 Liberal Arts)

WALTER HENRY FOX, M. D., 1905, Iowa.

Demonstrator in Anatomy, 1903. (Hall of Anatomy)

HUGO WILHELM KOEHLER, B. A., 1903, Syracuse University.

Instructor in German, 1905.

514 N. Linn St. (Liberal Arts)

FRANK ALBERT STROMSTEN, B. S., 1900; M. S., 1902, Iowa; D. Sc., 1905, Princeton.

Instructor in Zoology, 1905.

113 E. Court St. (104 Science Hall)

RICHARD PHILIP BAKER, B. Sc., 1887, University of London.

Instructor in Mathematics, 1905.

1004 E. College St. (115 Liberal Arts)

THE MEMBERS OF THE FACULTIES

27

CLARENCE MANLY THORNE, B. S., 1899, Northwestern University.

Instructor in Mathematics, 1905.

122 N. Capitol St. (115 Liberal Arts)

WILFIE ABRAHAM SUTHERS, D. D. S., 1902, Iowa.

Clinical Demonstrator of Operative Dentistry, 1905.

(Hall of Dentistry)

FREDERICK WILLIAM BAILEY, B. S., 1901; M. S., 1904; M. D. 1905, Iowa.

Instructor in Ophthalmology, 1901.

220 Davenport St. (University Hospital)

VALBORG KASTMAN, B. A., 1904, Iowa.

Assistant Instructor in Physical Training, 1902.

120 Jefferson St. (Close Hall)

MARY SLEIGHT EVERTS.

Assistant Instructor in Public Speaking and Acting Dean of Women, 1901.

N. Linn St. (117 Liberal Arts)

MARY GROVE CHAWNER, B. A., 1896, Penn College; M. A., 1904, Iowa.

Assistant Instructor in English, 1902. (226 Liberal Arts)

RUDOLPH ERNST KLEINSORGE, B. S., 1904, Iowa.

Assistant Instructor in Physiology, 1903.

HERTHA LOUISE VOSS, B. PH., 1904, Iowa.

Assistant Instructor in French, 1904.

20 E. Market St. (6 Liberal Arts)

CHARLES DELOS POORE, Anal. Chem., 1905, University of Minnesota.

Assistant Instructor in Chemistry, 1905.

JOHN JOSEPH LAMBERT, B. PH., 1899; M. S., 1901, Iowa.

Assistant Instructor in Histology and Embryology, 1898.

120 E. Market St. (Laboratory Hall)

CLARENCE WYCLIFFE WASSAM, B. PH., 1903; M. A., 1904, Iowa.

Assistant Instructor in Political Economy and Sociology, 1903.

220 N. Dubuque St. (205 Liberal Arts)

ROE EUGENE REMINGTON, B. A., 1905, University of Colorado.

Assistant Instructor in Chemistry, 1905.

122 N. Capitol St. (Chemical Building)

ADIN NOYES BROWN, Ph. G., 1903, Iowa.

Assistant Instructor in Chemistry, 1905.

(Chemical Building)

ARNOLD VAN COUTHEN PICCARDT HUIZINGA, B. D., 1904, Yale;
M. A., 1905, Princeton.

Assistant Instructor in French, 1905.
215 Bloomington St. (6 Liberal Arts)

FRED ALBERT, JR., B. PH., 1903; M. S., 1905, Iowa.
Fellow in Internal Medicine, 1903.

HUGH STRAIGHT BUFFUM, B. A., 1901; M. A., 1902, Iowa.
Fellow in Education, 1904.

SAMUEL WILLIAMSON COLLETT, B. S., 1886; M. S., 1894,
Moore's Hill College.
Fellow in Botany, 1905.

CHARLES HOWARD EDMONDSON, B. PH., 1903; M. S., 1904,
Iowa.
Fellow in Zoology, 1905.

HARRY HOLLAND FITCH, B. A., 1902, Iowa.
Fellow in Latin, 1904.

EDMUND CHRISTIAN NELSON, B. PH., 1904; M. A., 1905,
Iowa.
Fellow in History, 1905.

DON SEAVEY RATHBUN, B. S., 1904, Cornell College.
Fellow in Political Economy, 1905.

DANIEL STARCH, B. A., 1903, Charles City College; M. A.,
1904, Iowa.
Fellow in Philosophy, 1903.

CHRISTIAN EMIL BALE, B. A., 1904, Luther College.
Scholar in English, 1904.

PAUL FREDERICK EDINGER, B. A., 1905, Iowa.
Scholar in Geology, 1905.

MABEL EVELYN ELLEBBROEK, B. PH., 1905, Morningside Col-
lege.
Scholar in German, 1905.

EMERY NELSON FERRISS, B. PH., 1904, Western College; M.
A., 1905, Iowa.
Scholar in German, 1905.

GEORGE WOODWARD GEARHART, B. A., 1905, Parsons College.
Scholar in Political Economy and Sociology, 1905.

MARY KATHRINA HEARD, PH. C., 1892, University of Michigan; B. PH., 1905; M. D., 1905, Iowa.

Scholar in Ophthalmology and Otology, 1905.

HARRY MORGAN IVINS, B. S., 1904, Iowa.

Scholar in Animal Biology, 1905.

JAMES ASA MARMON, B. A., 1903, Simpson College.

Scholar in English, 1905.

DAVID JAMES McDONALD, B. A., 1905, Western College.

Scholar in Education, 1905.

ARTHUR C. MCLANE, B. PH., 1904, Iowa.

Scholar in Anthropology, 1905.

JOHN CARL PARISH, B. PH., 1905, Iowa.

Scholar in Political Science, 1905.

ALICE RIGBY, B. PH., 1902, Cornell College.

Scholar in English, 1904.

BERTHA SUNIER, B. A., 1905, Iowa.

Scholar in French, 1905.

ARTHUR LAWRIE TATUM, B. S., 1905, Penn College.

Scholar in Chemistry

DAVID DUKE TODD, B. S., 1905, Coe College.

Scholar in Chemistry, 1905.

FREDERICK ALDEN.

Interne in the Homeopathic Hospital, 1905.

RUDOLPH MARTIN ANDERSON, B. PH., 1903, Iowa.

Taxidermist, 1900.

FRED G. BAENDER.

Superintendent of Engineering Shops, 1905.

HELEN BASCHNAGEL.

Clerk in the College of Dentistry, 1896.

424 E. Market St. (13 Hall of Dentistry)

ALICE C. BEATLE, Graduate Nurse.

Superintendent of the Homeopathic Hospital and Nurses' Training School, 1905. (Homeopathic Hospital)

GARRETT BOS.

Laboratory Assistant in Physics, 1904.

RALPH LEONIDAS BYRNES, B. S., 1902, Iowa.

Senior Assistant in Pathology and Bacteriology, 1903.

30 THE STATE UNIVERSITY OF IOWA

JOHN WILLIAM CARVILLE.

Attendant in Geology, 1892.

610 E. Jefferson St.

LUCY M. CAVANAGH, B. S., 1896, Iowa.

Assistant in Botany, 1902.

ALICE BRADSTREET CHASE.

Executive Clerk, 1895. 24 N. Clinton St. (108 Old Capitol)

JOHN WILKINSON COGSWELL, B. S., 1904, Iowa.

Interne, Homeopathic Hospital, 1905.

FRED SUTTON COOK.

Laboratory Assistant in Pathology, 1905.

IRA NELSON CROW.

Assistant in Histology and Embryology, 1905.

EULA CARLOTTA DE VOLL.

Assistant in Registrar's Office, 1904.

629 N. Dubuque St. (108 Old Capitol)

FRED COLLINS DRAKE, B. PH., 1901; LL. B., 1903, Iowa.

Secretary to the President, and University Editor, 1903.

530 Washington St. (108 Old Capitol)

LOUIS WILLIAM DUTCHER.

Assistant Secretary to the Board of Regents, 1903.

(101 Old Capitol)

GILBERT HORACE ELLSWORTH.

Superintendent of Construction, Maintenance and Grounds,
1902. 1035 Burlington St. (101 Old Capitol)

**MARION FIDLAR, Graduate Nurse, St. Luke's Hospital, Chi-
cago.**

Head Nurse, University Hospital, 1904.

PAUL JOHN HANZLIK, PH. G., 1902, Iowa.

Attendant in Chemistry, 1905.

CONREID REX HARKEN.

Laboratory Assistant in Pathology and Bacteriology, 1905.

MANNING JAYNES, M. DI., 1898, Iowa State Normal.

Undergraduate Demonstrator in Pharmacology, 1905.

LEORA JOHNSON, M. D., 1890, Iowa.

Clinical Assistant to the Chair of Surgery, College of
Homeopathic Medicine, 1890.

22 N. Clinton St. (Hom. Hospital)

CARL WILLIAM KNAPP.

Undergraduate Assistant in Animal Biology, 1905.

PEARL MAY LANDON.

Assistant in English, 1905.

WILLIAM JUDD McCHESNEY.

Secretary to the Board of Regents, 1902. (101 Old Capitol)

JAMES CHARLES MCGREGOR.

Undergraduate Demonstrator in Pharmacology, 1905.

DIEDRICH JANSSEN MEENTS, B. S., Steinman College.

Assistant in Pathology and Bacteriology, 1904.

WINFRED MICHILL.

Assistant in Histology and Embryology, 1905.

JAMES MOORHEAD, M. D., 1893, Iowa.

Assistant in the Department of Theory and Practice, College of Homeopathic Medicine, 1903.

WILLIAM JOHN MORGAN, B. S., 1905, Morningside College.

Storekeeper in Chemistry, 1905.

MELVIN WESLEY MYLER, D. D. S., 1906, Iowa.

Assistant Demonstrator of Operative Technique, 1905.

JOHN THOMAS PADGHAM.

Student Assistant in Physiology, 1905.

ROBERT BAXTER PIKE.

Clerk in the Office of the Secretary of the Board of Regents, 1904.

HENRIETTA PRENTISS, B. A., 1902, Smith College.

Assistant in French, 1905. 122 N. Capitol St.

ENGELKE JANSSEN RINGENA.

Undergraduate Assistant in Physiology, 1905.

MALCOLM ALLEN ROYAL, B. S., 1904, Iowa.

Laboratory Assistant in Pathology, 1905.

ANNA M. SLATER.

Matron, University Hospital, 1905.

CHARLES HENRY ANDREW STELLING, M. D., 1905, Iowa.

House Physician, University Hospital, 1905.

KUNO HERBERT STEUCK.

Laboratory Assistant in Pathology, 1905.

LOVELL SWISHER.

Treasurer of the Board of Regents.

JAMES REED THOMPSON, M. D., 1905, Iowa.

House Physician, University Hospital, 1905.

JON ANDREAS UDDEN, B. A., 1905, Augustana College.

Assistant in Geology, 1905.

FREDERICK WILLIAM VALKENAAR.

Junior Assistant in Pathology and Bacteriology, 1905.

ORIE ELMER VAN DOREN.

Band Master, 1905.

JOHN VOS, D. D. S., 1904, Iowa.

Prosthetic Demonstrator in the College of Dentistry, 1904.

EVERETT CHAPMAN WARD.

Assistant in Histology and Embryology, 1905.

ELLA BETTS WATERBURY, B. A., 1905, Iowa.

Assistant Registrar, 1905. (108 Old Capitol)

NELSON DAVE WELLS, B. PH., 1901, Iowa Wesleyan.

Tutor in Medical Latin, 1905.

BERTHA WILKINSON, Graduate Nurse, 1898, St. Luke's Hospital, Chicago.

Superintendent of the University Hospital and Principal of the Nurses' Training School, 1904.
(University Hospital)

MILDRED REBECCA YULE.

Undergraduate Assistant in Animal Biology, 1905.

**MALCOLM GLENN WYER, B. A., 1899; M. L., 1901, Minnesota;
B. L. S., 1903, New York State Library School.**

Acting Librarian in Charge, 1904. (303 Liberal Arts)

**MERTON LEROY FERSON, B. PH., 1900; LL. B., 1901, M. A.,
1905, Iowa.**

Law Librarian, 1902. 223 Bloomington St. (Law Library)

**MAUD VANBUREN, B. L. S., 1902, Pratt Institute Library
School.**

Cataloguer, 1906.

LOUISE HOWELL, B. A. in L. S., 1904, Illinois.

Reference Assistant, 1904. (306 Liberal Arts)

**CAROLINE V. LANGWORTHY, B. L. S., 1903, University of Ill-
inois.**

Assistant Cataloguer, 1905. 125 N. Clinton St.

JOANNA GLEED STRANGE.

Assistant in the Library, 1901. (306 Liberal Arts)

NYLE WILLIAM JONES, LL. B., 1905, Iowa.

Assistant in the Library, 1902.

WILLIAM ORAL WATTERS, B. S., 1904, Parsons College.

Assistant in the Law Library, 1905. 4 E. Jefferson St.

HABOLD STEPHEN GREENLEAF, B. S., 1905, Parsons College.

Assistant in the Law Library, 1905. 4 E. Jefferson St.

HOWARD ROLLIN CHURCHILL, B. PH., 1901, Cornell College.

Assistant in the Law Library, 1905. 319 S. Capitol St.

HOWARD OMAR ROGERS.

Assistant in the Law Library, 1905. 403 S. Capitol St.

GENERAL INFORMATION

ORGANIZATION

The State University of Iowa is an integral part of the public school system of the state. As required by law, the work of the University is based upon the preparation afforded by the duly accredited high schools of the state, whose graduates are admitted to the undergraduate and professional courses upon presentation of the proper certificates. A sense of this vital connection with the public schools determines, in a large measure, the requirements for admission to the University, its spirit, and its courses of study. The state through the University undertakes to furnish instruction in the various branches requisite for a liberal education in the liberal arts, law, medicine, dentistry, pharmacy, nursing, and, in applied science, the various branches of engineering. It also aims to encourage research work in all departments, to produce creative scholars, and thus do its part in the enlargement of the domain of knowledge. Thus it is the general policy of the institution to foster the higher educational interests of the State, broadly and generously interpreted.

The control of the University is intrusted to a Board of Regents, consisting of the Governor of Iowa and the Superintendent of Public Instruction *ex-officio*, and of one member elected by the General Assembly from each of the eleven congressional districts.

INCOME OF THE UNIVERSITY

The University enjoys the proceeds of the invested funds and lands originally given by the United States. Recent General Assemblies have enlarged the general support fund of the University by permanent appropriations. The University enjoys the proceeds from a one-fifth of a mill

levy for buildings alone. The liberality of these assemblies, perhaps for the first time in its history makes it possible for the University to anticipate reasonably adequate support and modern buildings and equipment.

GROUNDS

Plans have been made to keep and beautify the historic Old Capitol campus as the center for the enlarged grounds which are to front the river and to be connected with the athletic field on the west, and through the newly acquired medical quadrangle, with the old park or hospital campus on the east. With fifty acres in the heart of one of the most picturesque and sanitary small cities in the United States, with possibilities of park extension across the river, the opportunities for landscape architecture equal those of the most favored seats of learning. The Iowa river is being dammed just below the University grounds, making a beautiful water front and giving facilities to add all forms of water sports to the athletics of the University.

BUILDINGS

The University at present occupies twenty buildings, beautifully situated near the business center of Iowa City. They are as follows, the order being that in which they were erected:

The Old Capitol, in which are located the administrative offices and the College of Law. This building is the old State House, the corner stone of which was laid July 4, 1840.

A temporary building for the engineering shops has been erected upon the foundations of the Old South Hall and the former medical hall. The two buildings have been connected by an enclosed hallway, making large and commodious quarters for the engineering shops.

The Hall of Physics is occupied exclusively by the laboratories and lecture rooms of the department of physics.

The Clinton Street building, No. 14 North Clinton street, formerly the homeopathic hospital, is now occupied by the department of surgery of the College of Medicine.

The Old Armory building has been assigned to the department of electrical engineering.

In Natural Science Hall are located the four departments of biological science of the College of Liberal Arts, and also the museum of natural history.

The Hall of Chemistry and Pharmacy contains the laboratories and lecture rooms of the several departments of chemistry and pharmacy.

Close Hall, the home of the Young Men's and Young Women's Christian Associations of the University, also contains the halls of six of the forensic societies; the entire lower floor is occupied by the women's gymnasium.

Dental Hall is occupied exclusively by the College of Dentistry, and furnished with the most modern equipment, electrical and otherwise.

The Hospital of the College of Homeopathic Medicine affords accommodations for fifty-four patients, and contains a large clinical amphitheater, dispensary, administrative office, and the library of the Homeopathic Medical College.

The Hospital of the College of Medicine is provided with a large amphitheater, numerous operating rooms and offices, a dispensary, and accommodations for seventy-five patients.

Three small buildings furnish accommodation for the standard weights and measures of the state; a student's astronomical observatory, and a carpenter shop.

The Hall of Liberal Arts, 120x260 feet on the ground, contains ninety-two rooms arranged for the respective departments of letters with office, seminar, departmental library and lecture rooms en suite. There are also an attractive drawing and rest room for women, psychological laboratories and a general lecture room. The State Historical Society and the general university library are temporarily lodged in this handsome Bedford stone and fireproof building. The style of the building harmonizes with the Old Capitol.

The Hall of Anatomy is the first building completed in the new medical quadrangle. It contains dissecting rooms with the most modern accommodations for twenty tables, an amphitheater with seating capacity of two hundred and

twenty-five persons, offices, reading rooms, and a preserving room. It is a handsome hexagonal, fireproof building of Bedford stone with granite foundations. The interior finish is designed to make it aseptic.

The second building in the new medical quadrangle contains the general and clinical laboratories of bacteriology, pathology, histology, physiology, and pharmacology. It is constructed in the same manner and in similar style to its companion building just described.

The University has recently completed a large armory and athletic pavilion for the use of the men of the University. The building is 84x162 feet in dimension and three stories in height. In addition to thorough equipment in the way of gymnasium apparatus, the building contains a twelve-lap, concave, canvas-lined running track. The building is situated just outside the athletic field which contains a football gridiron, a baseball diamond and a splendid two-fifth mile cinder track.

The new Hall of Natural Sciences, a fireproof stone building, the counterpart of the Hall of Liberal Arts, is now nearing completion. This building will ultimately be given wholly to the museum and departments of natural history, but will temporarily house the general library and furnish a general assembly hall to seat 1,800 people.

The north wing of the new engineering quadrangle has just been completed. The portion now ready for occupancy is 70x125 feet, three stories and a basement in height. It provides lecture, recitation, drawing and study rooms, with separate study space for each student, together with an engineering materials laboratory.

THE LIBRARIES

There are accessible to students the general university library and a series of valuable departmental libraries, also the State Historical Society library, which is kept in conjunction with the general library at the University; the library of the College of Law, and the libraries of the other professional colleges, as well as the Public Library of Iowa City. This makes available about 125,000 well selected vol-

umes in diverse fields of knowledge. A feature is made of having an extended list of current periodicals.

The university library contains about 60,000 volumes, not including a large number of pamphlets, and consists of the libraries of the colleges of Liberal Arts, Law, Medicine, Homeopathic Medicine, Dentistry, Pharmacy, and Applied Science. These libraries are shelved in their several college buildings, where they are accessible to anyone desiring to use them.

The library includes:

1. The Talbot Library, a large and valuable collection of works pertaining chiefly to natural history, explorations, voyages and travels.

2. The Americana Library of several hundred volumes, many rare and of considerable value, the greater number purchased with funds subscribed by the Alumni of the University, others contributed by friends.

3. A fine collection of philological periodicals given by the German citizens of the state.

4. The books contained in the official list of library books for school districts of Iowa recommended by the state board of educational examiners, and maintained for the use of the teachers of the state.

This library being a depository for the Government documents, the larger part of the "sheep bound reserve" set of Government publications are located here, and the set is being completed as fast as possible.

The University receives by purchase and exchange over 600 periodicals and scientific society transactions.

Members of the faculties and other officers of the University may draw books from the library. To all other persons it is a reference library, and as such is open to anyone.

The general reading room occupies the south end of the third floor of the Hall of Liberal Arts, and is open daily, except Sunday and legal holidays, from 8:00 A. M. to 10 P. M.

The library of the College of Law, numbering about 14,000 volumes, occupies the former Senate chamber on the second floor of the Old Capitol. It contains a full series

of the reports of the supreme court of the United States and of the courts of last resort of forty-five states, including all the series of reports most frequently referred to; also the American Decisions; American Reports; American State Reports; Lawyer's Reports Annotated; English Ruling Cases; a collection of English Reports, which, with additions lately made, is almost complete; full series of the Reporter System; and a large collection of the latest and best law text-books.

A valuable collection of 1,200 volumes relating principally to the civil law and the history of the common law, presented to the University by Mrs. Hammond, widow of William G. Hammond, LL. D., the first chancellor of the College of Law, is kept in the law library as a separate collection for the use of the students of the college and others interested in such subjects. These books are kept in special cases, under the charge of the law librarian, and are accessible upon request.

The reading room of the law library is open from 8:00 A. M. to 5:30 P. M., and from 7:00 to 9:00 P. M. of each day except Sunday.

The library of the College of Medicine, which was destroyed by fire in 1900, has been replaced, and comprises the latest editions of standard works, as well as many volumes of periodicals relating to the various branches of medical science.

The College of Homeopathic Medicine possesses a valuable professional library, located in the homeopathic hospital.

The department libraries are rich in literature of interest to the advanced student.

THE LIBRARY OF THE STATE HISTORICAL SOCIETY OF IOWA

The library of the State Historical Society, located in the Hall of Liberal Arts of the University, contains about 40,000 volumes and is open for the use of University students. This valuable collection of historical documents is rapidly growing. The society issues its own publications regularly

and has on its exchange list the publications of similar societies in the United States, as well as a large number of foreign publications and the publications of leading universities both at home and abroad. The society publishes quarterly a journal devoted to critical studies of the history and politics of Iowa.

MATERIAL EQUIPMENT

LABORATORIES

THE PSYCHOLOGICAL LABORATORY

The new psychological laboratory, completed in 1901, occupies a part of the second floor of the Hall of Liberal Arts. It includes, in common with the department of philosophy, the following rooms: Two lecture rooms, a library and seminary room, an apparatus room, a workshop, an observing room, a recording room, three general laboratory rooms, and two offices. Owing to the present crowded condition of the Hall of Liberal Arts, resulting from the recent fires, two of the above rooms are temporarily occupied by another department.

The rooms are large and well lighted, supplied with gas and electric light, and have special provisions for darkening. They are heated and ventilated by a system of indirect radiation, and supplied with water where needed. The rooms in the suite are connected by a system of concealed wires radiating from a central switchboard which has connections with a battery closet and the power house. Battery currents and the direct dynamo current may be drawn from several terminals in each room and any two or more rooms may be connected for experimental purposes by means of this system.

The observing room is practically sound-proof, light-proof, and jar-proof. It is a room 12x14, with an ante-room 4x14, built inside of another room which rests upon a special foundation and has no solid contact with any other part of the building. It is lined, carpeted, and furnished in black, and is supplied with gas, electric light, switchboard connections, and a special heating and ventilating system. The main room is entered through four tight fitting doors and when these are closed all communication with the out-

side takes place through telephone and electric recording instruments. In the typical experiments the observer is left alone in this room where the conditions of the experiment can be controlled, while the experimenter manipulates the instruments in and from the recording room.

The workshop is provided with bench, lathe, motor, tools, material for apparatus, drawing materials, mimeograph, etc.

The library and seminary room contains the entire department library, including the subjects of philosophy, psychology, logic, ethics, and æsthetics, and is open all day for the use of students.

The laboratory is equipped with a superior collection of apparatus, illustrative material, supplies, and conveniences for use in instruction and investigation in psychology. The general equipment of the laboratory is designed to fit the plan of instruction, according to which the student in psychology may, the first year, attend a course of lectures in which a rich collection of illustrative material is used and experiments are performed before the class by the instructor. The second year, the student may himself perform a series of model experiments, and for the third and following years he may engage in the investigation of original problems. Accordingly the equipment falls into three classes: (1) apparatus, charts, and other material for use in class demonstration for the first year in general psychology, (2) a complete set of apparatus for standard exercises which constitute the laboratory course for the second year, and (3) apparatus and the varied means employed in the research work, for special tests, and for advanced demonstration experiments.

ZOOLOGICAL LABORATORIES

LABORATORIES OF ANIMAL BIOLOGY

The laboratories for animal biology occupy the west half of the first floor of the Natural Science Hall, together with a portion of the basement. They are supplied with water and gas throughout, and are lighted by twenty windows.

The laboratory for the elementary courses receives light from the north. It is furnished with heavy oak, slate-topped tables, particularly adapted to the anatomical and microscopical requirements of the work. The tables will accommodate thirty-two students at one time.

The equipment of this laboratory includes thirty-two compound microscopes, as many dissecting microscopes, the requisite accessory optical apparatus, a series of over twelve thousand microscopical slides, a large number of anatomical preparations, charts, and models, physiological equipment, and the numerous pieces of minor apparatus, glassware, etc., incident to general biological work.

The laboratory for the several advanced courses is lighted from the west and south. It is furnished with tables and reagent racks designed to meet the special requirements of the work pursued here. A smaller room opening from the main one supplies the conditions desired for apparatus of constant temperature. The equipment of this laboratory embraces special compound and dissecting microscopes, sliding microtomes of approved pattern, three Minot automatic microtomes for serial sectioning, a large Lillie water bath for paraffin imbedding, a laboratory incubator for work in embryology, a warm chamber of ample size, a complete stock of biological reagents, sets of bottles for each student, a large assortment of glassware, a suspended pantograph, a series of over four hundred charts, and ninety-three wax models by Ziegler illustrating the embryology of *Amphioxus*, the Trout, the Frog, and the Chick.

Opening from the main laboratories are smaller rooms available for those pursuing special lines of investigation. The basement laboratory is utilized for aquaria, anatomical tanks, animal cages, and appliances for various lines of special work.

A reference library in English, French, and German is kept in the laboratories, and is accessible at all times during the working hours. A subject index on the card catalogue system renders the literature more readily available.

LABORATORY OF COMPARATIVE ZOOLOGY

This laboratory has been newly equipped and is now

able to furnish much better facilities than ever before. It is situated on the second floor of Natural Science Hall. The main items of the equipment are the following:

1. New laboratory tables designed especially for this work. They have glazed tops of alternating black and white squares to give suitable background for dissecting or examining delicate objects in glass dishes, and drawers for the accommodation of the dissecting tools, lenses, etc. The tables are provided with Welsbach burners in sufficient number to furnish the best of light for either dissecting or microscopic work, and will accommodate twenty-seven students.

2. A high grade dissecting microscope, provided with a jointed arm and two double achromatic lenses, for each student. On the theory that the work in zoology can be done better with a good dissecting equipment than by relying too much on the compound microscope, this laboratory has been provided with the best dissecting microscopes and lenses that could be purchased.

3. Compound microscopes of good quality in sufficient numbers to supply all students in introductory courses are at present available and high grade instruments are furnished to those intending to pursue advanced or research work in zoology.

4. An Imperial sciopticon for use in illustrating lectures. This instrument is provided with electric light, and microscope attachment.

5. A photographic camera with the usual accessories for photographic and lantern slide work, together with a convenient dark room.

6. A set of ordinary dissecting tools and a Coddington lens for each student, together with a very complete equipment in the way of dissecting pans and glassware, such as watch glasses, petrie dishes, stender dishes, embryo dishes, slides, covers, etc.

7. The very extensive zoological collections in the museum of natural history are at the disposal of students in this department, furnishing abundant material in many groups for advanced systematic work.

In this connection should be mentioned the depart-

mental library of zoological works, including a complete set of the *Annals and Magazine of Natural History*, most of the "Challenger" Reports, and works of reference of various kinds covering the field of zoology in a general way, and admitting of special treatment of several groups which are particularly well represented in the museum.

BOTANICAL LABORATORY

The laboratory is located on the second floor of Natural Science Hall, and is in direct communication with the herbarium room. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate thirty students at one time. It is equipped with new microscopes and with all the facilities for advanced histological work.

1. Connected with the main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special microscopes, a photomicrographic camera, and apparatus for investigation in vegetable physiology.

2. A fine stereopticon with hundreds of slides furnishes the material basis for general illustration, and for special illustrated lectures. The laboratories are well lighted and in every way adapted to satisfactory work.

3. The herbarium affords a very large amount of material suitably preserved for various lines of investigation in histology, embryology, as well as in all departments of taxonomic research.

4. A fully equipped dark-room is at the disposal of students whose work in the department requires photographic illustration.

5. All the more important works of reference in botanical science are found as a working library in the laboratory.

LABORATORIES OF GEOLOGY, PETROLOGY, AND PALEONTOLOGY

The equipment of the department embraces:

1. The laboratory collections, including:
 - a. An extensive collection of American and European fossils, illustrating the history and development of life from the earliest geologic ages to the present time.
 - b. Several hundred mineral specimens selected and arranged to illustrate the economic geological resources of the United States, including:
 - (1). The metalliferous products, such as the various ores of gold, silver, copper, iron, etc., and their modes of occurrence.
 - (2.) The non-metalliferous products, such as coal, building materials, gypsum, etc.
 - c. A collection of rock-making minerals.
 - d. A collection of rock specimens, illustrating the mineralogical composition, structure, mode of occurrence, and classification of rocks.
 - e. A large number of sections of rocks, minerals, and fossils for microscopic study in connection with the work in petrology and paleontology.
2. Globes; physical maps of the continents and oceans; a series of topographical and geological maps and charts, published by the United States Geological Survey, the various state surveys, and the surveys of foreign countries, geological and physiographical models, and relief maps; more than two thousand lantern slides, covering every phase of geology which can be illustrated in this way; several hundred photographs illustrating physiographic and geologic phenomena.
3. A lithological lathe for making microscopic and other sections of rocks, minerals, and fossils.
4. A number of petrographical microscopes of the most approved design; two Joly balances for specific gravity determinations; Mohs's scale of hardness, etc.
5. A complete photographic outfit, including a large photomicrographic camera.

6. A large series of negatives from which the student makes prints to illustrate their permanent notebooks.

7. Equipment for determinative mineralogy.

8. A collection of crystal models, natural crystals, and crystal sections to illustrate the work of crystallography.

9. The library of the department contains over 1,000 bound volumes and about 1,000 catalogued pamphlets. In addition to the standard works on geology and related subjects, the library contains the publications of the United States Geological Survey, the reports of the various state surveys, and a number of geological publications of foreign governments.

10. Geological phenomena illustrated within easy reach of Iowa City.

The surrounding neighborhood affords many instructive examples of phenomena of interest to the student of geology. At the same time it offers unexcelled opportunities for field work in mapping, making geological sections, tracing strata from one exposure to another, and making paleontological collections. The Pleistocene deposits are of especial interest.

The boulders of the drift afford an opportunity for a study of several types of crystalline rocks. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for a number of years.

THE LABORATORIES OF THE COLLEGES OF MEDICINE

The laboratories of the Colleges of Medicine are located in the new laboratory building and are provided with the most modern and adequate equipment.

The physiological laboratory occupies most of the first floor of the building. The main room is well filled with tables,—each table being supplied with gas and electrical apparatus, revolving drums, muscle levers, and other materials necessary for practical physiology. Special rooms are provided for students doing research or advanced work.

The histology and embryology laboratories are upon the second floor of the new hall and the rooms are arranged with special reference to the requirements of microscopical work. Besides the general laboratories for general class work a special laboratory is well furnished and equipped for advance research work of all kinds.

The pathology and bacteriology laboratories occupy the rooms on the third floor of this building and are provided with rooms and equipment adequate for their needs. The rooms are all well lighted and furnished with microscopes and other apparatus of the most modern types. By reason of special association with the pathological institutes of Vienna, Leipzig, and Munich, the department has come into possession of a most complete and varied collection of diseased tissues and organs for the study of general and special pathological histology.

The laboratory of experimental pharmacology, otology and rhinology have rooms prepared for them in this hall and are well supplied with apparatus.

The anatomical laboratory occupies the third floor of the new hall of anatomy and is fitted and equipped throughout with materials and instruments best adapted for anatomical work.

THE CHEMICAL LABORATORIES

A three-story brick building, 105x150 feet on each floor, is devoted entirely to the uses of the departments of chemistry and pharmacy. The lecture hall is built in amphitheater form and will accommodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant part of the room. There is also a special lecture room for students in pharmacy. The building contains a general laboratory 100 feet in length by twenty-seven feet in minimum breadth for the use of students in the colleges of Liberal Arts and Applied Science and two others nearly as large for those in the colleges of Medicine and Pharmacy; also a large laboratory for advanced students, a laboratory for metallurgy and assaying, a laboratory of physical chemistry, and several private

laboratories which may be fitted up for various special lines of research.

There are also reading rooms containing the libraries of general and pharmaceutical chemistry, spectroscopy and balance rooms, engine and dynamo rooms, dark rooms for photography, store rooms, and offices.

A storage battery and dynamo in connection with the gas engine furnish electricity to the various laboratories for electrolysis and other uses.

THE PHYSICAL LABORATORY

The department of physics occupies the entire three stories of the Hall of Physics, a plain rectangular structure 60x90 feet.

The large north room of the basement is equipped with a number of dynamos and other apparatus, with a switchboard wired to all parts of the building. Another basement room is given to the storage battery.

The basement also contains a shop furnished with electric power and equipped with wood and metal working lathes, drill press, cabinet maker's bench and necessary tools. This shop furnishes an opportunity for the making of new and the repair of old apparatus.

On the floor above are the offices, and several special laboratories for optics, electricity, heat, etc. One room contains the physical library, and serves also as reading and seminary room.

The second floor, formerly occupied by the general library of the University, has been remodeled and adapted to the use of this department. A lecture room with a seating capacity of 175 has been fitted up with conveniences for physical demonstrations, such as facilities for darkening the room, and for projection by sunlight and various sources of artificial light. Connected with the lecture room is a commodious apparatus and preparation room. A recitation room, a large, well lighted elementary laboratory, and a photographic laboratory occupy the remainder of the space on this floor.

The former library gallery is used as a room for advanced students in the study of special problems and in which they may be free from outside disturbance.

The laboratory is well supplied with lecture apparatus, and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in mechanics, optics, and electricity. Most of the apparatus has been purchased in recent years and has been selected with great care, and some has been constructed for particular uses in this laboratory.

ASTRONOMICAL OBSERVATORY

The students' astronomical observatory is conveniently located on the university campus. It is furnished with a five-inch equatorial telescope by Grubb of Dublin, having circles, driving clock, position micrometer, helioscope, and solar and stellar spectroscopes; a transit instrument by William Wuerdermann, of Washington; a prismatic sextant and artificial horizon by Pistor and Martins, of Berlin; clock; chronometer; chronograph, etc.

The lecture room equipment includes a fine astronomical globe, a planetarium, a stereopticon, and a series of several hundred lantern slides to which additions are constantly being made. Numerous charts, models and photographs furnish additional illustrative material.

The mathematical and astronomical library comprises over twelve hundred volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

ENGINEERING LABORATORIES

The engineering laboratories at present include a hydraulic laboratory, a laboratory for testing materials of construction, and an electrical laboratory. In addition to this the light, power and heating plant of the University is available for experimental purposes in the courses in steam engineering, and the heating and ventilating systems for courses in heating and ventilating. Until the completion of the new engineering quadrangle the hydraulic laboratory and the laboratory for testing materials is temporarily housed with the machine and wood-working shop tools in the Old South Hall. The electrical laboratory is housed in

the Old Armory building which is entirely devoted to the department of electricity.

In the laboratory for testing materials there is an autographic torsion machine, a Riehle automatic standard testing machine of 100,000 pounds capacity, a standard abrasion cylinder for testing paving brick, a Fairbanks automatic briquette testing machine of 1,000 pounds capacity, an Olsen automatic briquette testing machine of 2,000 pounds capacity, and a full equipment for preparing specimens of wood, metal, cement and concrete.

In the hydraulic laboratory is a Worthington duplex fire pump of 500 gallons per minute capacity, connected with the Iowa City water supply and a high pressure main leading to hydrants on the campus. This pump may be used for experimental purposes, giving large volumes under high pressures. There are also tanks, standard orifices, weirs, water meters of various forms, and a Price acoustic current meter.

The civil engineering department is amply provided with field instruments for practice in the different branches of plane surveying. This equipment, which is mostly new and from the best makers, includes compasses, levels, transits, plane table, solar instruments, and all minor tools necessary for land, topographical and railroad surveying.

For shop practice there is an excellent equipment of wood and metal working tools and machinery which will be added to as needed.

The electrical laboratory is supplied with 110 and 220 volt continuous current from the university light and power plant. To a considerable equipment of current measuring instruments, voltmeters, ammeters, galvanometers, etc., has been added during the past biennium between \$4,000 and \$5,000 worth of electrical apparatus, consisting of motors, generators, power brakes, calibrating sets, etc.

Through the liberality of Mr. and Mrs. Euclid Sanders, of Iowa City, the water power known as the Terrill Mill Dam, or mill privilege, has been granted to the University, to be used primarily in the development of the College of Applied Science. The power thus available will range from 150 to 300 continuous horse power, depending upon the

stage of the river. A new dam and power plant which will furnish power and light to the university buildings, and serve at the same time as a hydraulic laboratory, are in course of erection, about a mile below the old dam, near the southern limit of the university property. This location brings this plant within easy access of the other power plants and laboratories, and secures a fine water front to the west of the campus. The available power will also be materially increased over that at the old site. Turbines of different sizes will be installed and connected to generators for the development of power on a commercial scale, and for practical experimentation. A canal will be constructed for experiments with broad crested weirs and meter measurements.

NATURAL HISTORY COLLECTIONS

GEOLOGICAL COLLECTIONS

1. A large series of building stones, fossils, earths, etc., collected chiefly in the prosecution of the state geological surveys between the years 1856 and 1870. These collections are constantly increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. Mineralogical collections embracing the metalliferous, non-metalliferous, and rock-making minerals.

4. The petrological collection includes several hundred rock specimens illustrating the various types of igneous and sedimentary rocks, their mineralogical composition and structural features.

5. A collection of cycads from Mesozoic sandstone in the Black Hills.

6. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

7. A collection illustrating general economic geology.

A beautifully preserved skeleton of a mosasaur (*Platecarpus*) has lately been added to the geological collections through the generosity of the Davenport Alumni Association.

During the year additions have been made to the collections both by purchase and gift, as well as by the efforts of the members of the department.

HERBARIUM

The herbarium is located in two rooms on the second floor of the Hall of Science. It contains:

1. A large collection of myxomycetes from all parts of the world, but particularly rich in North American forms.
2. A very large and constantly increasing collection of fungi, both parasitic and saprophytic, from all parts of North and Central America.
3. A collection of lichens, representing most of the species of the United States.
4. An increasing collection of mosses and liverworts, chiefly North American, but containing representatives from all parts of the world.
5. A large collection of ferns and related plants from both hemispheres, including an especially complete series from tropical America.
6. A collection of many thousand flowering plants, representing very fully the flora of North America, and especially rich in Central America and European forms. The number of plants in the herbarium exceeds 200,000.
7. A collection of seeds and dry fruits, including cones, representing the flora of North America chiefly, but containing also much material from the tropics.
8. A collection of the principal woods of North America.
9. A collection of economic plant products, including plant fibers, *materia medica*, etc.
10. A very extensive collection of Iowa plants, including all groups represented in the state. These are separate from the general herbarium, and offer an excellent opportunity to students who desire to study the state flora.
11. A large collection of fossil leaves, etc., not now displayed for lack of room.

The herbarium collections, thanks to friends and collectors in various parts of the world, are steadily increasing in extent and value. It is hoped that private collec-

tors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

Botanical field work has been conducted by representatives in the department in various parts of the state and country. During the past year work has again been directed to the collection of the state flora chiefly, with special reference to matters of distribution. Excursions have also been made to New Mexico, Arizona and California, and much valuable material from these regions was secured. Special thanks for herbarium material are due to J. P. Anderson, F. J. Seaver, Alamogordo Lumber Co., John M. Holzinger, C. L. Moore, U. S. Department of Agriculture; Northland Pine Co., Bardwell Robinson Co., Lucy M. Cavanagh, A. B. Caldwell and the North Pine Co.

MUSEUM OF NATURAL HISTORY

The museum of natural history has attained a rank second to none in the universities of the West and is daily becoming more valuable through donations of material by friends of the University.

By the generosity of the collector the Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot, of Sioux City, has donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds, and anatomical preparations.

During the last fifteen years expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnipeg country, Lake Athabasca, Great Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, Atlantic coast, British West Indies, the Bay of Naples, and the Hawaiian Islands.

Partly through purchase, but more largely through

donation, important additions have been made to the museum in the way of material secured from the Louisiana Purchase Exposition at St. Louis. These have come mainly through the commissions representing the Philippines, Ceylon, East Indies, Nicaragua, Honduras, Argentine Republic, Egypt, and Venezuela.

More than half of the natural history collection is included in the *reserve series*, which has been arranged and labeled with the intention of making the material of the utmost practical use to students of natural history.

A library of reference for the use of students of zoology is placed on the museum floor, and a free use of all the material in the various collections is encouraged, for which purpose a cheerful and convenient study room has been provided for the use of students and specialists.

ZOOLOGICAL COLLECTIONS

1. **MAMMALS**—A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A good series of the larger mammals of North America has been secured through the kindness of Mr. D. H. Talbot, and the efforts of the late Dr. Frank Russell, who returned from the far north with an exceptionally fine series of the larger mammals of that region, including five good specimens of the musk ox.

2. **BIRDS**—The ornithological material in the museum now embraces about 12,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides a large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and the emu, of great value.

The Bond collection of birds of Wyoming, donated, together with a large collection of Iowa birds, by Mr. Frank Bond, of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq., of England.

The Talbot collection of American birds, embracing thousands of specimens, mostly from the Mississippi valley.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, the late Dr. Frank Russell, and Professor A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg country, Great Slave Lake, Athabasca Lake, the Mackenzie river, and the Arctic coast, made by Dr. Frank Russell.

A small but valuable collection of birds of the Hawaiian Islands, collected by the Curator in 1902.

The curator has donated his study series of over 800 bird skins from Central America and the Bahama Islands.

A series of fifty-six specimens of birds from Ceylon was secured at the Louisiana Purchase Exposition.

3. REPTILES—The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Ex-Regent B. F. Osborn has donated his large collection of alcoholic specimens, which consist principally of reptiles, thus nearly doubling the series of these forms.

The U. S. Bureau of Fisheries has donated to the University the series of American turtles recently exhibited at St. Louis, and a fine mounted crocodile was secured from the Philippine exhibit.

4. FISHES—Professor B. Shimek has presented the museum with his entire collection of fresh-water fishes, of which the museum now has seven hundred specimens, besides a number of marine forms.

The U. S. Bureau of Fisheries has recently donated, in addition to previous contributions, over 2,000 specimens of North American and Hawaiian fishes, and the Alaska Packers' Association has promised a full series of specimens to illustrate the embryology of the salmon.

Mr. E. E. Watson donated a collection of marine fishes collected by himself on the coast of Maine, and Mr. Herbert Moon secured a number of specimens from Puget Sound; both during the summer of 1904.

5. **INSECTS**—The museum has a good collection of the local fauna, which is largely used in class work, in addition to a series of several thousand specimens from other regions which are useful for reference. Advanced students will find ample material for research work in many orders. The exhibit series shows a number of the most striking types in the Lepidoptera and Coleoptera, and illustrates some interesting principles in the line of coloration and adaptive structures.

6. **MARINE INVERTEBRATES**—A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by marine forms collected during two expeditions to the Bahamas, Cuba, and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors Calvin and Nutting.

A carload of marine specimens was secured by the Bahama expedition in 1893. This collection contains a large number of deep-water forms, thus giving the University special advantages in the matter of marine materials for exhibition and study.

A valuable series of marine forms of the more fragile and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the *Stazione Zoologica* at Naples, where the most superb preparations of the beautiful forms are made. These are supplemented by a number of gelatine models of medusæ, hydroids, etc., imported from Germany.

The museum is to receive one entire series of the marine forms collected by the U. S. S. "Albatross" during her Hawaiian cruise of 1902.

The most important addition to the department of marine invertebrates secured during recent years is promised

by the Philippine Commission at the Louisiana Purchase Exposition and consists of a particularly fine series of the superb mollusca of the East Indies, as well as many specimens of corals, sponges, etc.

The Shimek collection of land and fresh-water shells, embraces nearly all the species known to occur in Iowa, together with many exotic species.

7. **OSTEOLOGICAL PREPARATIONS**—A series of mounted skulls and skeletons, illustrating the osteology of typical series of vertebrates, is of the greatest value to students of comparative anatomy and zoology. The skeleton of a large whale (*Baelna biscayensis*) was secured in 1898, and a fine specimen of Steller's sea lion in 1899.

The museum now possesses skulls or entire skeletons of typical species of nearly all families of mammalia.

ETHNOLOGICAL COLLECTIONS

There is considerable ethnological material in the museum, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukchees, and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot of Sioux City has added very largely to this department of the museum. The late Dr. Russell was active in securing ethnological specimens illustrating the life and manufactures of the Crees, of other northern tribes of Indians, and of the Esquimaux.

Mr. H. M. Griffith of the Fifty-first Iowa Volunteers brought from Luzon a collection which he has generously donated to the museum. To this will soon be added an exceedingly valuable series of models of houses, boats, fish traps, agricultural implements, etc., secured from the Philippine exhibit at St. Louis.

A small collection illustrating the ethnology of the Hawaiian Islands was secured by the Curator in 1902.

THE EDUCATIONAL MUSEUM

A good beginning has been made in the collection of an educational museum, in which it is designed to have ma-

terial representing all phases of model school room instruction, and also materials representing educational practices of the past.

Anyone desiring to assist in this enterprise may send such contributions as old text books, books of collateral literature, models of work executed by pupils, including examination papers, written digests, laboratory notes, papers, drawings, work in color, designs in wood, metal, clay, or paste board, photographs, plans, and descriptions of school buildings. All objects should be sent to "The Educational Museum," and all correspondence addressed to the Professor of Education. Prompt acknowledgment will be made of all favors received.

MUSEUM OF SCULPTURE CASTS

In connection with the department of classical archaeology a museum of plaster casts of Greek and Roman sculpture has been established. Full casts have been obtained of the Venus from Melos, and of four other well known statues; a representative series of reliefs illustrate the remains of the art of Phidias; the collection also includes several busts, three from statues of the Greek authors. The class graduating from the College of Liberal Arts in 1901 added to the collection a cast of the statue of Sophocles, which is preserved in the Lateran Museum at Rome; this cast is exhibited in the main corridor of the Hall of Liberal Arts.

COMMERCIAL MUSEUM

To provide practical instruction in commercial subjects a museum has been founded. Here are gathered the products of the several countries and the various stages in the manufacture of the raw products into finished and by-products are shown. An attempt is made to have samples of all articles produced from a given raw product. This material is supplemented by views showing the method of culture and the various processes of its manufacture that cannot be well illustrated by samples of the unfinished product.

STATISTICAL LABORATORY

The rapidly increasing volume of statistical data published by the government and other agencies render a knowledge of the methods of securing and compiling such material essential. That this may be suitably shown a statistical laboratory has been established. At present the electrical machines and other devices used in the federal and state censuses may be found herein. A few calculating machines are at the disposal of the students, and many of the instruments and devices used in the construction of diagrams and charts. It is the intention to add to this equipment as rapidly as possible and ultimately to have a complete assortment for statistical work.

ITEMS OF GENERAL INTEREST

UNIVERSITY PUBLICATIONS

LEARNED BULLETINS

Natural History Bulletin—The laboratories of natural history inaugurated in 1888 the publication of bulletins for the purpose of preserving a record of the work prosecuted along the lines of botany, geology, and zoology. Four volumes have thus far appeared in sixteen numbers, and the fifth volume is in process of publication. The numbers have a large circulation and are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or in material. To others the price is 50 cents a number.

The Transit is an engineering journal published annually by the University. It is edited by a committee of the Engineering Society, and contains the results of original research in engineering problems by alumni and undergraduate students. Nine volumes have appeared, the first two containing two numbers each.

The Law Bulletin is published at irregular intervals and has been issued for ten years past. It is devoted to the discussion of legal topics taken up in the College of Law.

The Bulletin of the Homeopathic Medical College has been published since 1895. Eight numbers have appeared.

The State University of Iowa Studies in Psychology is a biennial publication devoted to experimental psychology. It was begun in 1897. Four volumes have been published.

The State University of Iowa Studies in Sociology, Economics, Politics, and History—Volumes I and II of this series, containing respectively 296 and 150 pages, have already appeared and will be followed by others.

Provision has been made for the publication of bulletins of physical science, education, and linguistic science.

POPULAR BULLETINS

By authority of the Board of Regents separate announcements of the following University organizations will be sent gratuitously, postage paid, to all persons who apply for them: Graduate College; College of Liberal Arts; of Law; of Medicine; of Homeopathic Medicine; of Dentistry; of Pharmacy; of Applied Science; the School of Political and Social Science and of Commerce; the Summer Session; the Medical and Surgical Clinics; the Hospitals; and Nurses' Training Schools. In calling for announcements please state the organization or subject concerning which you desire information. The annual calendar of the University consists of the above announcements with the roster of the university staff of administration and instruction, and catalogue of all students. It is for exchange with other institutions and for the General Assembly. Otherwise it may be had only upon special request and payment of postage.

STUDENT PUBLICATIONS

The Daily Iowan—A University newspaper edited by the students.

The Hawkeye—A University annual published by the junior class.

The Middletonian—Published twice a year by the students of the College of Medicine.

LITERARY, FORENSIC AND SCIENTIFIC SOCIETIES

The literary, scientific and forensic societies maintained by the faculty and students of the University afford an important means of general culture, scientific research, and literary and forensic training, and thus form a valuable element as well as an attractive feature in University life.

Of those conducted by the faculty the Baconian has for its object discussion of scientific questions; the Graduate Club is devoted to the interests of the Graduate College; the Political Science Club discusses questions of history,

politics, economics, law, education, and ethics; the Whitney Society is devoted to the field of language and literature and the methods of teaching these subjects; the Greek Club consists of instructors and graduate students working in Greek philology; the Writers' Club is an organization of members of the department of English and graduate students in English; the Edda is devoted to the interests of Scandinavian languages and literature; the Philosophical Club meets monthly for the discussion of problems in philosophy, psychology, logic, ethics, and aesthetics; the Cercle Francais has social gatherings for practice in colloquial French, and at its meetings papers are read in English or in French.

The Phi Beta Kappa Society elects to membership, on the basis of high scholarship, a certain number from the graduating class who have completed the classical or philosophical course.

The Sigma Xi is organized to encourage original research in science, and elects to membership from the senior class a limited number of persons who give promise of becoming investigators in some department of science.

The Engineering Society, the Hammond Law Senate, the Forum, the Middletonian Society, the Hahnemannian Society, and the Mortar and Pestle club, are organizations of students in the profession colleges.

Among the purely literary societies are Polygon, and Ivy Lane. The Irving Institute, the Zetagathian Society, the Philomathean Society for young men; and the Hesperian Society, the Erodelphian Society, and the Octave Thanet Society for young women, hold weekly meetings for improvement in debate, oratory, writing, and declamation.

MUSICAL ORGANIZATIONS

The University has no musical department, but music, both vocal and instrumental, is encouraged and enjoyed by volunteer organizations among students and faculty members. There is a military band, a university orchestra, men's first and second glee clubs, a women's glee club, a mandolin club, a string quartette, vocal quartettes, and class and department organizations.

PUBLIC LECTURES

The regents encourage the visits of distinguished scholars, specialists and men in public affairs to give addresses, under the title of "Public Lectures," open to all the University. Thus the students have the latest information as to what is current in the world of letters, science and art, and public affairs.

A local lecture bureau furnishes annually a popular series of literary and musical entertainments.

DEBATE AND ORATORY

The debating leagues of the University conduct inter-university debates with the better universities of the Middle West. Those scheduled for this year include contests with Minnesota, Notre Dame, Kansas, and South Dakota universities.

The Oratorical League is made up of the members of the Zetagathian, Irving, Philomathean, Forum, and Hammond Societies and is a member of the Northern Oratorical League, consisting of Oberlin College, Northwestern University, and the Universities of Wisconsin, Michigan, Chicago and Iowa. The University sends a representative each year to take part in the final contest.

CHRISTIAN ASSOCIATIONS

The Young Men's and Young Women's Christian Associations are the centers of the religious life of the University and active factors in all forms of moral and Christian work properly within the scope of such organizations. All students of good moral character are invited to membership either active or associate. Through the exertions of these associations Close Hall has been erected, mainly from funds contributed by the faculty, students, and alumni of the University, and the citizens of Iowa City. It is a spacious and convenient building, furnishing reading rooms, reception rooms, and offices for the associations. It is extensively used for the meeting of the associations, as well as

for the social, literary, and class gatherings of the students.

Through the generosity of Hon. T. S. Parvin the social room of the Y. W. C. A. has been finely fitted out with furniture, cabinet, and pictures as a memorial to his wife and daughter. A similar room for the Y. M. C. A. has been suitably furnished by Mr. W. D. Cannon, Jr., of Iowa City.

The associations strive to be useful to all students in every feasible way. Members meet new students at the trains, aid them in securing suitable rooms and boarding places, hold receptions at the opening of the year and on various occasions, and maintain an employment bureau. The general secretary is glad to be helpful to students on all occasions.

Churches not affiliated with the Y. M. and Y. W. C. A. have special societies for their students.

MEANS OF MORAL AND RELIGIOUS CULTURE

University assemblies with brief religious exercises are held weekly, and although the attendance is voluntary, they are crowded. Thus the purpose of cultivating the moral, religious and social spirit of the University is heartily recognized.

CONVOCATIONS

In addition there are occasional convocations of all the faculties and students, in which addresses by distinguished speakers are given. Upon these occasions when the entire University is convened, degrees may be conferred.

Besides the opportunities offered by the Christian Associations and the positive influence exerted by them, the churches of the city, in which the members of the faculty are a large factor, take a deep interest in the students of the University and heartily welcome them to their public services and to share in their religious activities and social life. All the prominent churches and denominations are represented, and relative to its population Iowa City deserves to be called the "city of churches."

HOSPITALS

The two hospitals connected with the University afford the best of care and treatment for students seriously ill.

Provision for free beds for students is commended to the attention of generous friends of the University.

THE DEAN OF WOMEN

Special provision is made for the comfort and welfare of the young women of the University by the appointment of a dean of women, who is always ready to help or advise any woman student who may need such assistance. She will recommend boarding and lodging places so far as she is able, see that students who are ill while away from home are put under proper care, assist, as far as possible, young women who wish to earn their way through college, correspond with parents and guardians who desire to make inquiries regarding their daughters or wards, take an interest in the women's organizations and be ready to make such suggestions as may seem to her to be for the good of all.

APPROVED HOMES FOR YOUNG WOMEN

A list of homes for young women in which there are certain reasonable house rules as to hours, company, etc., may be had upon application to the dean of women. This list will be made up after careful inspection and will be revised whenever necessary.

PHYSICAL TRAINING AND ATHLETICS

The University authorities encourage physical training as acquired in the gymnasium, in military training and in the exercises and sports on the athletic field, but only in such amount and of such character as is compatible with the higher objects of the University. Intercollegiate contests are allowed and are held with the leading colleges and universities of the Middle West, but under conditions as to membership, organization of teams, and leave of absence which are determined by the athletic board.

The above named athletic board consists of five students, five members of the faculty, and one member from the alumni of the University. The general control and supervision of all athletics are in the hands of this board.

The University is a member of the "College Conference," comprising the Universities of Chicago, Illinois, Indiana, Iowa, Michigan, Minnesota, and Wisconsin, together with the Northwestern and Purdue Universities. The athletic board requires a strict compliance with the "Conference Rules."

The athletic field contains about ten acres and is in the immediate vicinity of the University grounds. It affords room for a two-fifths mile running track, a football gridiron, and a base ball diamond entirely separate from one another.

The armory and athletic pavilion which will be used temporarily for gymnasium purposes by the men has modern apparatus and is favorably located in connection with the athletic field and military drill ground. Classes will be organized for young men and young women and expert instructors provided for each.

TUITION

The following schedule of fees became operative with the first semester of the academic year 1904-1905:

Every student, before entering any department of the University, is required to pay a matriculation fee of ten dollars. This fee is paid but once.

Tuition is free in the Graduate College. All students entering this college, who have not previously paid the matriculation fee of ten dollars, however, are required to pay said fee, excepting those to whom graduate scholarships or fellowships have been awarded.

In lieu of all laboratory and other fees, a tuition fee of ten dollars a semester, payable in advance, is required in the College of Liberal Arts.

The tuition charges in the Colleges of Law, Medicine, Homeopathic Medicine, Dentistry, and Pharmacy are twenty-five dollars a semester or fifty dollars for the year.

Every student for the Summer Session of the University is required to pay a fee of five dollars, and if such a student is a candidate for a degree and has not yet paid the matriculation fee he must also pay said fee.

Students entering the Library School will be required

to pay a fee of ten dollars for the first, and five dollars for the second year's course.

Tuition fees will in no case be refunded.

Every student, before graduating or receiving any degree in any college of the University, is required to pay a diploma fee of ten dollars for each degree he receives.

A student carrying six hours or less of work a week in the University shall pay half the regular tuition in the college in which he is registered for the time during which he shall carry such work.

A student registered in more than one college of the University is required to pay the tuition of the college having the higher or highest rate of tuition, of the colleges in which he is registered, and is then granted the privilege of free tuition in any other college in the University.

For special examinations given at other times than those regularly scheduled by the faculty a student is required to pay a fee of one dollar for each such examination, excepting in cases where special entrance examinations are taken, when the fee shall in no case exceed two dollars.

There are no extra fees whatever, but for each laboratory course in chemistry there is required a deposit of \$3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory.

In the College of Liberal Arts, a student who has been in attendance upon a summer session and has paid the ten dollar matriculation fee, may have his registration projected during the remainder of the collegiate year, doing work absent from Iowa City, upon the payment of five dollars. Such fees will be known as "Projected Registration Fees."

STUDENT'S EXPENSES

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COMPARATIVE STATEMENT OF STUDENT'S EXPENSES FOR THE ACADEMIC YEAR, SEPTEMBER TO JUNE.

	LOW	AVE'AGE	LIBERAL
Matriculation Fee (first year only)	\$ 10.00	\$ 10.00	\$ 10.00
Tuition Fee	*20.00	20.00	20.00
Board (36 weeks)	68.00	99.00	126.00
Room, heated and lighted (one-half)	36.00	45.00	54.00
Total	\$ 129.00	\$ 174.00	\$ 210.00

The above estimates do not include such incidentals as books, clothing, laundry or membership in societies, some of which are luxuries, and all of which vary greatly with the means and habits of the individual.

The strong and capable student can reduce his expense below the lowest estimate presented in this table which may be regarded as a fair one for a student of ordinary constitution and power of self command.

SELF SUPPORT

Many students earn the whole or a part of their expenses at the University by doing such work as waiting on tables at eating houses, caring for furnaces, etc. The Y. M. C. A. and Y. W. C. A. conduct a free labor bureau, which is at the service of students. Iowa City is a town of 9,000 inhabitants, whose citizens are friendly to the University and take pleasure in affording to deserving students the opportunity to earn their necessary expenses. It rarely happens that the student who needs it fails to secure steady employment of some kind.

FREE TUITION

Tuition fees may be remitted in the College of Liberal Arts in the case of a student who brings certificates signed

* The item of tuition is here calculated for the colleges of Liberal Arts and Applied Science only. Thirty dollars should be added for the colleges of Law, Medicine, Homeopathic Medicine, Dentistry, and Pharmacy.

by three county officers to the effect that the applicant is an industrious person of good character and entitled to the relief sought on account of pecuniary need. Blank forms for such certificates may be had by addressing the President of the University.

The Board of Regents has made provision whereby all honorably discharged soldiers or sailors of the Spanish-American war, desiring to enter the College of Liberal Arts, may have the tuition fee of twenty dollars remitted. To such persons in the professional colleges there will be an annual remission of twenty-five dollars; one-half of this amount to be applied on each semester's tuition.

A. WHITNEY CARR FREE SCHOLARSHIPS

Mr. A. Whitney Carr, of Jordan, N. Y., believing that education in the higher institutions of learning should be as free to every comer as it is in the common schools, and desiring to contribute as far as possible to this end, has generously donated what is known as "The A. Whitney Carr Free Scholarship Fund," for the creation of free scholarships for the benefit of poor and worthy young men and women who are unable to educate themselves without aid, the interest alone to be used for this purpose, the principal to be kept intact.

In accordance with the broad and generous wish of the founder, the A. Whitney Carr scholarships will be granted, so far as the fund will allow, to all applicants who are poor and worthy in respect to character and intellectual ability, without regard to sex, race, or color.

Scholarships apply to all the years of the college course; are awarded annually; and are liable to be revoked at any time if the recipients are inefficient, or found not to be worthy or justly entitled to them.

The value of each scholarship is at least \$20 for each of the four years of the college course. The value will be realized by students in having their tuition and other fees free, the tuition of persons receiving awards being paid from the scholarship fund.

In case the number of scholarships awarded does not exhaust the income of the fund, holders of scholarships who

are crippled or are physically unable to earn the means to pay expenses other than tuition, and are without help from parents or friends, may receive additional assistance at the discretion of those having the disposal of the fund; but this additional assistance is not to exceed \$100 a year, save in cases of extreme disablement and destitution, when it may reach the amount of \$150 a year.

Scholarships will not be granted to applicants addicted to the use of tobacco or intoxicating liquors.

Scholarships will be awarded by the President of the University and committees of the colleges of Liberal Arts and Applied Science on the basis prescribed by the founder. A candidate for assistance from this fund must have his application endorsed by the principal of the preparatory school from which he is accredited to the University, and by at least one other person of prominence familiar with the character and financial circumstances of the applicant.

PRIZES

PICKARD PRIZE—A prize of \$20 was offered last year by Dr. J. L. Pickard for the encouragement of extempore speaking to the student in political science who was awarded first rank in competitive extemporaneous debate. A prize of the same value is again offered for this year. The competitive debate will take place early in June.

LOWDEN PRIZES—Frank O. Lowden, Esq., of the class of 1885, offers prizes of the value of \$25 each for excellence in Latin, in Greek, in botany, and in geology, and \$50 in mathematics.

MAYER PRIZE—Mr. Max Mayer of Iowa City has established a prize of the annual value of \$25 for excellence in scholarship and athletics. This prize is open to students of all colleges of the University.

THE LOCAL ALUMNI ASSOCIATION PRIZE—An annual prize of free tuition, \$20, is offered to the freshman from Johnson county who passes the best special examination set for this purpose.

LOWDEN PRIZE IN DEBATE—Frank O. Lowden, Esq., of the class of 1885, offers an annual prize of fifty dollars for excellence in debate.

OLD ENGLISH PRIZE—The Early English Text Society of London offers one of its texts as a prize for excellence in Old English.

A citizen of Iowa City offers a copy of Gray's Field Manual for the best work in the botany of the spring term.

Mr. Lowden has given \$3,000 as an endowment to the Northern Oratorical League. As this University is a member of the league, students are invited to compete and share in the benefits of this endowment.

BRYAN PRIZE—Mr. William Jennings Bryan has established an annual prize of the value of \$10 for the best essay on a subject pertaining to the science of government. The prize is open to any student in the University.

HAMILTON CLUB PRIZE—The Hamilton Club of Chicago offers two prizes of the value of \$100 and \$50 each to the students who win first and second places respectively in the annual Hamilton Club oratorical contest. The contest is open to all students registered in the College of Liberal Arts.

THE JOHN BARRETT PRIZES—The Honorable John Barrett, the United States Minister to Colombia, offers prizes of \$100.00, \$75.00, \$50.00, to be awarded to the authors of the best papers on certain political, economic and historical subjects. Undergraduate, professional and graduate students are alike eligible. A list of the subjects and full information concerning the conditions of the award may be had from the President's office.

**THE COLLEGE OF LIBERAL
ARTS**

THE COLLEGE OF LIBERAL ARTS

FACULTY AND INSTRUCTORS

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D., 1877, Yale; PH. D., 1883, Leipzig; LL. D.,
1895, Williams.

President, 1899.† 603 College St. (108 Old Capitol)

AMOS NOYES CURRIER, B. A., 1856; M. A., 1859, Dartmouth;
LL. D., 1893, Des Moines.

Professor and Head of the Department of Latin Language
and Literature, and Dean of the College of Liberal Arts,
1867. 32 Bloomington St. (108 Liberal Arts)

SAMUEL CALVIN, M. A., 1874; LL. D., 1904, Cornell College;
PH. D., 1888, Lenox; F. G. S. A.

Professor and Head of the Department of Geology, 1874.
522 N. Clinton St. (108 Science Hall)

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Mon-
mouth; PH. D., 1895, Lenox.

Professor and Head of the Department of Botany, 1878.
728 Washington St. (206 Science Hall)

†**GEORGE THOMAS WHITE PATRICK**, B. A., 1878, Iowa; B. D.,
1885, Yale; PH. D., 1888, Johns Hopkins.

Professor and Head of the Department of Philosophy, 1887.

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell
University.

Professor and Head of the Department of German Lan-
guage and Literature, 1888.
311 N. Capitol St. (101 Liberal Arts)

LAENAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor and Head of the Department of Mathematics, Dean
of the Graduate College, 1886.
612 N. Dubuque St. (113 Liberal Arts)

CHARLES CLEVELAND NUTTING, B. A., 1880; M. A., 1882,
Blackburn University.

Professor and Head of the Department of Zoology, and
Curator of the Museum of Natural History, 1886.
922 E. Washington St. (304 Science Hall)

†Date following title indicates year of appointment to serv-
ice in the University. The names are arranged in groups ac-
cording to seniority of appointment to present rank.

†Absent with leave.

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B. D., 1881, Yale; D. C. L., 1898, Penn College.

Professor and Head of the Department of Political Economy and Sociology, and Director of the School of Political and Social Science, 1889.

11 E. Bloomington St. (205 Liberal Arts)

ELBERT WILLIAM ROCKWOOD, B. S., 1884; M. A., 1901, Amherst; M. D., 1895, Iowa; Ph. D., 1904, Yale.

Professor and Head of the Department of Chemistry and Toxicology, 1888.

1011 Woodlawn. (Chemical Laboratory)

WILLIAM CRAIG WILCOX, B. A., 1888; M. A., 1891, University of Rochester.

Head of the Department of History and Professor of American History, 1894.

629 N. Dubuque St. (222 Liberal Arts)

GILBERT LOGAN HOUSE, B. S., 1891; M. S., 1892, Iowa; Ph. D., 1901, Johns Hopkins.

Professor of Animal Biology, and Director of the Zoological Laboratories, 1892.

480 Iowa Ave. (101 Science Hall)

BENJAMIN FRANKLIN SHAMBAUGH, B. Ph., 1892; M. A., 1893, Iowa; Ph. D., 1895, Pennsylvania.

Professor and Head of the Department of Political Science, 1895.

219 N. Clinton St. (202 Liberal Arts)

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor and Head of the Department of English, 1899.

1041 Woodlawn. (227 Liberal Arts)

LEONA ANGELINE CALL, B. A., 1880; M. A., 1883, Iowa.

Professor of Greek Language and Literature, 1885.

32 Bloomington St. (106 Liberal Arts)

HENRY EVARTS GORDON, B. A., 1879; M. A., 1901, Amherst.

Professor of Public Speaking, 1900.

303 N. Capitol St. (312 Liberal Arts)

ARTHUR FAIRBANKS, B. A., 1886, Dartmouth; Ph. D., 1890, Freiburg, I. B.

Professor of Greek Literature and Archeology and Head of the Department of Greek and Secretary of the Graduate Faculty, 1900.

7 E. Bloomington St. (310 Liberal Arts)

FREDERICK ELMER BOLTON, B. S., 1893; M. S., 1896, Wisconsin; Ph. D., 1898, Clark.

Professor and Head of the Department of Education; Director of the Summer Session, 1900.

1019 College St. (217 Liberal Arts)

FACULTY AND INSTRUCTORS

77

BOHUMIL SHIMEK, C. E., 1883; M. S., 1902, Iowa.

Professor of Physiological Botany, Professor of Botany in
the College of Pharmacy, and Curator of the Herbarium,
1890. 529 Brown St. (201 Science Hall)

FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Col-
gate.

Professor of Latin, 1895.
315 S. Dodge St. (111 Liberal Arts)

CARL EMIL SEASHORE, B. A., 1891, Gustavus Adolphus; PH.
D., 1895, Yale.

Professor of Psychology, 1897.
204 Fairchild St. (211 Liberal Arts)

HARRY GRANT PLUM, B. PH., 1894; M. A., 1896, Iowa.

Professor of European History, 1900.
(315 Liberal Arts)

HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.

Professor of Entomology, and Assistant Curator of the Mu-
seum of Natural History, 1894.
911 Iowa Ave. (308 Science Hall)

FRANK ALONZO WILDER, B. A., 1892, Oberlin; PH. D., 1902,
Chicago.

Professor of Petrology, Economic Geology and Mining, 1903.
603 N. Dubuque St. (106 Science Hall)

ARTHUR GEORGE SMITH, B. PH., 1891; M. A., 1895, Iowa.

Professor of Physics and Mechanics, 1898.
West Side. (Hall of Physics)

JOHN GEORGE CHALMERS, B. A., 1901, Lafayette.

Professor and Director of Physical Training and Athletics,
1908.

WILLIAM ROLLA PATTERSON, B. DL., 1888; B. S., 1889, Iowa
State Normal; B. PH., 1895, Iowa; PH. D., 1898,
Pennsylvania.

Professor of Commerce and Statistics in the Department
of Political Economy and Sociology, 1898.
505 Washington St. (209 Liberal Arts)

GEORGE T. FLOM, B. L., 1893, Wisconsin; M. A., 1894, Van-
derbilt; PH. D., 1899 Columbia.

Assistant Professor of French, 1901. (120 Liberal Arts)

CHARLES WARREN WEEKS, B. S., 1898, State University of
Nebraska; First Lieutenant 30th Infantry, U. S. A.

Professor of Military Science and Tactics and Commandant
of the Cadet Battalion, 1905. 6 Bloom Terrace (Armory)

KARL EUGEN GUTHE, PH. D., 1892, Marburg.

Professor and Head of the Department of Physics, 1905.
707 N. Dubuque St. (Hall of Physics)

FOREST CHESTER ENSIGN, B. PH., 1897; M. A., 1900, Iowa.

Acting Professor in Education and Inspector of High
Schools, 1905. 311 Ronalds St. (216 Liberal Arts)

FREDERICK BERNARD STUBM, B. A., 1892, Michigan.

Assistant Professor of German, 1892. (102 Liberal Arts)

CLARENCE WILLIS EASTMAN, B. S., 1894, Worcester Polytech-
nic; M. A., PH. D., 1898, Leipzig.

Assistant Professor of German, 1898.
226 Fairchild St. (102 Liberal Arts)

†STEPHEN HAYES BUSH, B. A., 1901; M. A., 1902, Harvard.

Professor of Scandinavian Languages and Literatures, and
Acting Professor of English Philology, 1900.
609 Summit St. (10 Liberal Arts)

HERBERT CLIFFORD DORCAS, B. PH., 1895, Iowa; M. A., 1903,
Columbia.

Assistant Professor of Education, University Examiner, and
Registrar, 1895. 429 Ronalds St. (108 Old Capitol)

CARL LEOPOLD VON ENDE, B. S., 1893, M. S., 1894, Iowa; PH.
D., 1899, Goettingen.

Assistant Professor in Chemistry, 1899. (Chem. Lab'y)

WILLIAM J. KARSLAKE, B. S., 1891; M. S., 1894, Lafayette;
PH. D., 1895, Johns Hopkins.

Assistant Professor in Chemistry, 1904.
935 Iowa Ave. (Chemical Laboratory)

JAMES BURT MINER, B. S., 1897; LL. B., 1899; M. S., 1901,
Minnesota; PH. D., 1903, Columbia.

Assistant Professor in Philosophy, 1904.
430 N. Gilbert St. (215 Liberal Arts)

HENRY LE DAUM, B. A., 1896; M. A., 1903, Ohio Wesleyan
University; B. A., 1897, Harvard.

Assistant Professor in Charge of the Department of French
Language and Literature, 1905.
411 S. Dubuque St. (119 Liberal Arts)

JOSEPH JASPER McCONNELL, B. A., 1876; B. DL., 1878; M. A.
1880, Iowa; LL. D., 1904, Coe College.

Lecturer on Education, 1891. Cedar Rapids, Iowa

LUTHER ALBERTUS BREWER, B. A., 1883; M. A., 1886, Penn-
sylvania College.

Lecturer on Journalism, 1900. Cedar Rapids, Iowa

DUREN JAMES HENDERSON WARD, B. A., 1878; S. T. B., 1884,
Hillsdale College; M. A., 1883, Harvard; PH. D.,
1887, Leipzig.

Lecturer in Anthropology, 1905.
228 N. Clinton St. (221 Liberal Arts)

†Absent in residence at Harvard.

FACULTY AND INSTRUCTORS

79

CHARLES F. LORENZ, B. S., 1897; M. S., 1898, Iowa.

Instructor in Physics, 1900. West Side. (Hall of Physics)

SAM BERKLEY SLOAN, B. A., 1899, Nebraska.

Instructor in English, 1899.

606 N. Linn St. (118 Liberal Arts)

FRANK EDWARD HORACK, B. PH., 1897; M. A., 1899, Iowa;

PH. D., 1902, Pennsylvania.

Instructor in Political Science, 1902. (817 Liberal Arts)

PERCIVAL HUNT, M. DI., 1897, Iowa State Normal; B. A.

1900; M. A., 1904, Iowa.

Instructor in English, 1900.

(226 Liberal Arts)

CHARLES LAZARUS BRYDEN, E. M., 1902; B. S. in Chemistry,
1904, Lafayette College.

Instructor in Mining and Metallurgy, 1904.

(Chemical Laboratory)

EDWARD LEWIS DODD, B. A., 1897; M. A., 1901, Western

Reserve University; M. A., 1902; PH. D., 1904,
Yale.

Instructor in Mathematics, 1904.

526 N. Linn St. (115 Liberal Arts)

EDWARD A. RULE, B. S., 1904, Iowa.

Instructor in Physical Training, 1905. (Athletic Pavillion)

EDWIN FORD PIPER, B. A., 1897; M. A., 1900, Nebraska State

University.

Instructor in English, 1905.

506 N. Linn St. (7 Liberal Arts)

HUGO WILHELM KOEHLER, B. A., 1903, Syracuse University.

Instructor in German, 1905.

514 N. Linn St. (Liberal Arts)

FRANK ALBERT STROMSTEN, B. S., 1900; M. S., 1902, Iowa;

D. Sc., 1905, Princeton.

Instructor in Zoology, 1905.

113 E. Court St. (104 Science Hall)

RICHARD PHILIP BAKER, B. Sc., 1887, University of London.

Instructor in Mathematics, 1905.

1004 E. College St. (115 Liberal Arts)

CLARENCE MANLY THORNE, B. S., 1899, Northwestern Uni-
versity.

Instructor in Mathematics, 1905.

122 N. Capitol St. (115 Liberal Arts)

LEWIS HENRY HANEY, B. A., 1903; M. A., 1904, Tuck School,

Dartmouth College.

Acting Instructor in Commerce and Statistics, 1906.

VALBORG KASTMAN, B. A., 1904, Iowa.

Assistant Instructor in Physical Training, 1902.
120 Jefferson St. (Close Hall)

MARY SLEIGHT EVARTS.

Assistant Instructor in Public Speaking and Acting Dean
of Women, 1901. N. Linn St. (117 Liberal Arts)

**MARY GROVE CHAWNER, B. A., 1896, Penn College; M. A.,
1902, Iowa.**

Assistant Instructor in English, 1902.
4 E. Jefferson St. (226 Liberal Arts)

HEERTHA LOUISE VOSS, B. PH., 1904, Iowa.

Assistant Instructor in French, 1904.
20 E. Market St. (6 Liberal Arts)

**CHARLES DELOS POORE, Anal. Chem., 1905, University of
Minnesota.**

Assistant Instructor in Chemistry, 1905.

**CLARENCE WYCLIFFE WASSAM, B. PH., 1903; M. A., 1904,
Iowa.**

Assistant Instructor in Political Economy and Sociology,
1903. 220 N. Dubuque St. (205 Liberal Arts)

**ROE EUGENE REMINGTON, B. A., 1905, University of Col-
orado.**

Assistant Instructor in Chemistry, 1905.
122 N. Capitol St. (Chemical Building)

**ARNOLD VAN COUTHEN PICCARDT HUIZINGA, B. D., 1904, Yale;
M. A., 1905, Princeton.**

Assistant Instructor in French, 1905.
215 Bloomington St. (6 Liberal Arts)

HUGH STRAIGHT BUFFUM, B. A., 1901; M. A., 1902, Iowa.
Fellow in Education, 1904.

**SAMUEL WILLIAMSON COLLETT, B. S., 1886; M. S., 1894,
Moore's Hill College.**

Fellow in Botany, 1905.

**CHARLES HOWARD EDMONDSON, B. PH., 1903; M. S., 1904,
Iowa.**

Fellow in Zoology, 1905.

HARRY HOLLAND FITCH, B. A., 1902, Iowa.

Fellow in Latin, 1904.

**EDMUND CHRISTIAN NELSON, B. PH., 1904; M. A., 1905,
Iowa.**

Fellow in History, 1905.

- DON SEAVEY RATHBUN**, B. S., 1904, Cornell College.
Fellow in Political Economy, 1905.
- DANIEL STARCH**, B. A., 1903, Charles City College; M. A., 1904, Iowa.
Fellow in Philosophy, 1903.
- CHRISTIAN EMIL BALE**, B. A., 1904, Luther College.
Scholar in English, 1904.
- PAUL FREDERICK EDINGER**, B. A., 1905, Iowa.
Scholar in Geology, 1905.
- MABEL EVELYN ELLERBROEK**, B. PH., 1905, Morningside College.
Scholar in German, 1905.
- EMERY NELSON FERRISS**, B. PH., 1904, Western College; M. A., 1905, Iowa.
Scholar in German, 1905.
- GEORGE WOODWARD GEARHART**, B. A., 1905, Parsons College.
Scholar in Political Economy and Sociology, 1905.
- HARRY MORGAN IVINS**, B. S., 1904, Iowa.
Scholar in Animal Biology, 1905.
- JAMES ASA MARMON**, B. A., 1903, Simpson College.
Scholar in English, 1905.
- DAVID JAMES McDONALD**, B. A., 1905, Western College.
Scholar in Education, 1905.
- ARTHUR C. McLANE**, B. PH., 1904, Iowa.
Scholar in Anthropology, 1905.
- JOHN CARL PARISH**, B. PH., 1905, Iowa.
Scholar in Political Science, 1905.
- ALICE RIGBY**, B. PH., 1902, Cornell College.
Scholar in English, 1904.
- BERTHA SUNIER**, B. A., 1905, Iowa.
Scholar in French, 1905.
- ARTHUR LAWRIE TATUM**, B. S., 1905, Penn College.
Scholar in Chemistry
- DAVID DUKE TODD**, B. S., 1905, Coe College.
Scholar in Physics, 1905.
-
- RUDOLPH MARTIN ANDERSON**, B. PH., 1903, Iowa.
Taxidermist, 1900.

GARRETT BOS.

Laboratory Assistant in Physics, 1904.

JOHN WILLIAM CARVILLE.

Attendant in Geology, 1892.

MARK SEAVEY CATLIN, B. PH., 1905, University of Chicago.

Assistant in the Department of Physical Training, 1906.

LUCY M. CAVANAGH, B. S., 1896, Iowa.

Assistant in Botany, 1902.

CARL WILLIAM KNAPP.

Undergraduate Assistant in Animal Biology, 1905.

PEARL MAY LANDON.

Assistant in English, 1905.

WILLIAM JOHN MORGAN, B. S., 1905, Morningside College.

Storekeeper in Chemistry, 1905.

HENRIETTA PRENTISS, B. A., 1902, Smith College.

Assistant in Latin, 1905.

ORIE ELMER VAN DOREN.

Band Master, 1905.

MILDRED REBECCA YULE.

Undergraduate Assistant in Animal Biology, 1905.

MALCOLM GLENN WYER, B. A., 1899; M. L., 1901, Minnesota;

B. L. S., 1903, New York State Library School.

Acting Librarian in Charge, 1904. (308 Liberal Arts)

MAUD VANBUREN, B. L. S., 1902, Pratt Institute Library School.

Cataloguer, 1906.

LOUISE HOWELL, B. A. in L. S., 1904, Illinois.

Reference Assistant, 1904. 306 Liberal Arts.

CAROLINE V. LANGWORTHY, B. L. S., 1903, University of Illinois.

Assistant Cataloguer, 1905.

JOANNA GLEED STRANGE.

Assistant in the Library, 1901.

NYLE WILLIAM JONES.

Assistant in the Library, 1902.

**STANDING COMMITTEES OF THE FACULTY OF THE
COLLEGE OF LIBERAL ARTS.**

ADMISSION, CLASSIFICATION, AND CONDITIONED STUDENTS:
Professors Loos, Currier, Nutting, Rockwood; the Registrar, Secretary.

COURSES OF STUDY: Professors Currier, Macbride, Weld, Loos, Houser, Ansley, Bolton, Seashore.

EXECUTIVE: The President, Professors Macbride and Loos.

DISCIPLINE: The Dean, Professors Macbride and Loos.

LIBRARY: The President, Professors Shambaugh, Fairbanks, Nutting, Smith.

MILITARY: Professors Weeks, Gordon, Smith, Flom, Chalmers.

PHYSICAL CULTURE OF WOMEN: The Dean of Women, Professors Call, Chalmers.

PREPARATORY SCHOOLS: Professors Ensign, Macbride, Patterson, Wickham, Plum.

PROGRAMME: Professors Ansley, the Registrar, Guthe.

RULES: Professors Wilson, Shambaugh, Ansley.

SUMMER SESSION: Professors Bolton, Wilcox, Shimek, Potter, Calvin.

REQUIREMENTS FOR ADMISSION

Applicants for admission to the freshman class of the College of Liberal Arts should be at least sixteen years of age, and must present satisfactory evidence of having completed the preparatory studies specified below. An examination is required of all students who do not present acceptable certificates.

It is expected that the following branches of study will be completed in the grammar school: Practical arithmetic, reading, penmanship, elementary English grammar and English composition, geography, bookkeeping (single entry), physiology (the statutory requirement for primary and grammar schools), United States history (two semesters' work.)

In estimating the amount of work required for admission, a *preparatory credit* is regarded as the equivalent of one study daily for a semester of eighteen weeks on the basis of four studies a day. Thus eight credits stand for a normal year's work.

For admission to first year standing thirty preparatory credits are required. No student will be admitted whose deficiencies exceed the amount represented by three credits, except as provided in the following paragraph. Candidates having deficiencies not exceeding this limit may be admitted upon condition that they complete their preparatory work within the first year after admission. Students who are admitted with conditions can make them up in the University, in the accredited preparatory schools of the city or under the direction of tutors approved by the faculty.

Applicants for admission to the College of Liberal Arts who present thirty credits in acceptable preparatory subjects but who are deficient in required preparatory work may be admitted as unclassified students. When all requirements for first year standing have been met, such un-

classified students will be transferred to the list of regular candidates for a degree.

Graduates from three-year high schools may be admitted on like conditions.

Of the thirty preparatory credits required for admission, *seventeen are specific requirements and thirteen elective.*

SPECIFIC AND ELECTIVE REQUIREMENTS FOR ADMISSION

One foreign language (See note 2).....	4 credits
English	6 credits
History (may include civics and economics).....	2 credits
Algebra	3 credits
Plane geometry	2 credits
Electives	13 credits

NOTES

1. The specific and elective requirements in the foregoing paragraph are in themselves sufficient for admission to the combined courses in *medicine, *homeopathic medicine, and dentistry.

2. Students who offer only two years of foreign language for entrance will have their electives limited inasmuch as they will be required to carry at least twenty semester hours of foreign language before graduation, of which sixteen hours must be in one foreign language. *When two years of Latin are offered to fulfill entrance requirements in foreign language sixteen semester hours in Latin must be earned in the University.*

3. Students who present no preparatory credits in foreign language will be registered as unclassified students until they have satisfactorily completed, without University credit, the amount of work laid down in this announcement as constituting two years of preparatory work in some one foreign language. Facilities will be provided for

* Students who fail to present at least one year of work in Latin for admission to the combined course in medicine or in homeopathic medicine will be required to take the one-year course in Medical Latin at the University.

doing this work in the University, in the accredited schools of Iowa City, or under tutors approved by the University.

ELECTIVES

The electives presented for admission may consist of additional work in foreign languages to complete the entire thirty credits, or of additional work of approved character in English, history, solid geometry, or science as outlined under group V on page 95. Candidates are advised to present additional work in a foreign language, English, history, or solid geometry rather than to present the maximum of six semesters' work in science. When additional work in Latin or modern languages is presented as an elective, it is provided that not less than two years be given to some one language, and not less than one year to each additional language that may be offered.

EXAMINATION FOR ADMISSION

Applicants presenting proper certificates from accredited schools showing that they have completed the preparatory studies required for admission, as specified above will be admitted without examination. These certificates are to be made out on blank forms which will be furnished on application to the President of the University, and they must contain specific statements as to the amount of work done in each study. Delay in matriculation will be avoided if these certificates are made out and forwarded to the University before September 1.

Applicants from accredited schools presenting certificates for work not fully meeting the requirements for admission may satisfy these requirements by passing examinations in the subjects in which they are deficient.

If an applicant for admission by certificate has completed the prescribed amount of preparatory work in certain branches of study in considerably less time than that indicated as being necessary under ordinary conditions, the University reserves the right to examine him in such branches of study.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the programmes given below*. He should present himself at once to the University Examiner, who will give all necessary directions.

For *each separate* examination given at any other time than that announced in the programmes which follow, a fee of *one dollar* will be charged by the University. For a *series* of examinations covering two or more subjects a fee of *two dollars* will be charged.

PROGRAMMES OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Monday, September 17, to Wednesday, September 19, 1906.

Greek,	2 to 4 credits, Monday,	8:00 a. m.
Latin,	2 to 8 credits, Monday,	9:30 a. m.
French,	2 to 4 credits, Monday,	8:00 a. m.
German,	2 to 4 credits, Monday,	9:30 a. m.
English and English Grammar,	} 2 credits, Monday,	11:00 a. m.
Literature,		1:30 p. m.
General History,	2 credits, Monday,	3:00 p. m.
English History,	1 credit, Monday,	4:30 p. m.
United States History,	1 credit, Tuesday,	8:00 a. m.
Civics,	1 credit Tuesday,	9:00 a. m.
Economics,	1 credit, Tuesday,	10:00 a. m.
Plane Geometry,	2 credits, Tuesday,	11:00 a. m.
Algebra,	3 credits, Tuesday,	1:30 p. m.
Physical Geography,	1 credit, Tuesday,	3:00 p. m.
Physica,	2 credits, Tuesday,	4:00 p. m.
Botany,	1 credit, Wednesday,	3:00 p. m.
Physiology,	1 credit, Wednesday,	4:00 p. m.

SECOND SEMESTER

Thursday, January 31, to Saturday, February 2, 1907.

The examinations will be held at the same hours as in the programme above, reading Thursday, Friday, and Saturday for Monday, Tuesday, and Wednesday, respectively.

ADVANCED STANDING

Students from approved colleges bringing proper certificates of work and standing will be admitted without examination. In determining their position in the University, however, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, *provided they enter not later than the beginning of the senior year*. The assignment of studies will be at the discretion of the faculty.

Graduates from the four years' course of the Iowa State Normal School will be given advanced standing of sixty semester hours without examination and will be required to spend two years at the University before receiving a degree.

The requirement that all applicants for admission to the University must bring certificates showing that they have completed two years' work in some one foreign language applies also to applicants for advanced standing.

THE SUBJECTS REQUIRED OR ACCEPTED FOR
ADMISSION

GROUP I—FOREIGN LANGUAGES

In the case of each of the four foreign languages which may be offered for admission a course of study is suggested. What the University demands, however, is proficiency in the subject rather than a particular course of foreign language study, and the courses are outlined simply to indicate how the necessary proficiency may be attained.

1. GREEK—Grammar, Xenophon's *Anabasis* (four books), Homer's *Iliad* (three books).

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax, and a considerable working vocabulary. White's *First Greek Book* and Goodwin's *Greek Grammar* are the books recommended for beginners. Exercise in writing Greek should be kept up through the whole

preparatory course in order to fix the student's knowledge of vocabulary as well as of grammar, and to place it completely at his command. The work in Homer should give familiarity with peculiar Homeric forms, the commoner words in the Homeric vocabulary, and the meter of the epic.

2. **LATIN**—Grammar, Caesar (four books), Cicero (six orations), Vergil (six books), with Prosody.

Instead of the prescribed Caesar an equivalent amount of *Viri Romae* or Nepos will be accepted. It is expected that four of the six required orations of Cicero (The Catiline orations being taken as the standard of length) and four of the six books of Vergil will be read thoroughly, and the remainder rapidly with a view to securing facility in translation. Equivalents in kind will be accepted for any part of the specific requirements. Sight reading should be taught and practiced from the first. An accurate and ready knowledge of grammatical forms and construction and a good vocabulary are of essential importance. Unless the student has acquired this knowledge, he is not prepared for freshman work in Latin.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course*.

The Roman pronunciation is used in the University.

3. **FRENCH**—For a full statement of the work to be done and for suggestions as to methods and available texts, the teacher is referred to Section X, pages 75 to 91 of the *Report of the Committee of Twelve of the Modern Language Association of America*, which has been issued in a convenient form by Messrs. D. C. Heath & Co. This report should be in the hands of every teacher of French. The following course or its equivalent will be accepted:

First year: I. Grammar (with exercises), Fraser and Squair. II. Composition based on "The Last Class," and Grandgent's Materials (Heath). III. Translation, (1) *Trois Contes Cholsis*, (Daudet); (2) *Le Voyage de M. Perrichon* (Labiche); (3) *Colomba* or *Quatre Contes* (Mérimée). IV. Correct Pronunciation.

Note. Give much attention to pronunciation.

Second year: I. Grammar (advanced) with special reference to syntax and idioms. II. Composition based on "The Siege of Berlin," Grandgent's Materials (Heath). III. Translation of not less than 250 pages of well chosen selections from the prose works of at least five nineteenth century writers. IV. Pronunciation.

4. GERMAN—During the first year the work in German should comprise: (1) Careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflections of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs, also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from seventy-five to one hundred pages of graduated texts.

During the second year the work should comprise: (1) The reading of about one hundred and fifty pages of literature in the form of easy stories and plays; (2) accompanying practice in the translation into German of easy variations upon the matter read; (3) continued drill upon the rudiments of the grammar.

For a fuller statement of the work to be done and for suggestions as to the methods and available texts, the teacher is referred to Section VII of the *Report of the Committee of Twelve of the Modern Language Association of America*, which has been issued in a convenient form by Messrs. D. C. Heath & Co. This report should be in the hands of every teacher of modern languages.

GROUP II—ENGLISH

5. ENGLISH—Applicants for admission to the College of Liberal Arts are required to present at least six semester credits in English. Other credits in English may be

presented as electives. If six credits only are offered in the subject, they should be as follows:

a. Composition and rhetoric....2 2-5 credits.

Proper preparation for this requirement includes constant practice in writing, with careful correction and revision of themes. A part of the time should be devoted to the study of some good text-book. Text-books suggested are: Herrick and Damon's *Composition and Rhetoric*; Hill's *Beginnings of Rhetoric and Composition*; Kavana and Beauty's *Composition and Rhetoric*; Keeler and Davis's *Studies in English Composition*; Lewis's *Inductive Lessons in Rhetoric*; Lockwood and Emerson's *Composition and Rhetoric*; Merkley's *Modern Rhetoric*; Newcomer's *Elements of Rhetoric*; Scott and Denny's *Composition-Rhetoric*; Smith-Thomas's *Complete Course*; Webster's *English Composition and Literature*.

b. Literature.....3 3-5 credits.

Throughout the high school course much attention should be paid to English and American Literature. Entire master-pieces suited to the attainments of the class should be carefully studied. In addition, collateral reading should be assigned and written reports required. Among the master-pieces should be those suggested in the "uniform college entrance requirements" in English. For 1906-1908 these are as follows:

(1) For careful study:

Burke's speech on *Conciliation with America*; Macaulay's *Essays on Milton and Johnson*; Milton's *Minor Poems*; Shakespeare's *Julius Caesar*.

(2) For general reading:

Addison's *Sir Roger de Coverley Papers*; Coleridge's *Ancient Mariner*; Eliot's *Silas Marner*; Goldsmith's *Vicar of Wakefield*; Irving's *Life of Goldsmith*; Lowell's *Vision of Sir Launfal*; Scott's *Ivanhoe*; Scott's *Lady of the Lake*; Shakespeare's *Merchant of Venice*; Shakespeare's *Macbeth*; Tennyson's *Idyll's of the King*.

During the last year of the course a good outline history of English Literature, such as Halleck's, Moody and Lovett's, Painter's, Pancoast's, Scudder's, or Simonds's, should be carefully studied.

For the study of American Literature, text-books suggested are: Noble's *Studies in American Literature*; Matthews's *Introduction to American Literature*; Newcomer's *American Literature*; Pancoast's *American Literature*.

The requirements in English are in harmony with the report of a committee representing the colleges and secondary schools of Iowa. This committee recommends to secondary schools the following course of study in English, the figures indicating the number of recitation periods each week:

FIRST YEAR

<i>First Semester</i>	<i>Second Semester</i>
Composition and Rhetoric—3	Composition and Rhetoric—3
English Classics—2	English Classics—2

SECOND YEAR

Composition and Rhetoric—2	Composition and Rhetoric—2
English Classics—3	English Classics—3

THIRD YEAR

Composition and Rhetoric—1	Composition and Rhetoric—1
English Classics—4	English Grammar—4

FOURTH YEAR

Composition and Rhetoric—1	Composition and Rhetoric—1
History of English Literature and study of English Classics—4	History of English Literature and study of English Classics—4

The expression "English Classics" as used in this outline means classics written in English. American literature is of course not excluded.

An extract from the report of the committee follows:

"Although the colleges require but three years' work in English for admission to the freshman class, the committee strongly recommends that all four year high schools offer a four year course in English and that all graduates

from these high schools take the entire course. However, in the case of pupils who are especially proficient in English or who are doing more than four years' work in foreign language, the work of the third year may be omitted. Pupils who are preparing for college should be careful to include in their reading all the classics indicated as belonging to the list of readings for entrance to college."

GROUP III—HISTORY, CIVICS, AND ECONOMICS

6. HISTORY—At least two semesters' work should be presented in history. One semester's work in civics will be accepted in partial fulfilment of this requirement. The course of study and available text-books should be selected from the following: First semester, *History of Greece* (Oman, Smith, Cox, or Myers); second semester, *History of Rome* (Allen, Morey, Smith, or Myers); third semester, *History of England* (Larned, Montgomery, Gardiner or Andrews); or *The History of the United States* (Channing, Thomas, Fiske, Johnston, Montgomery, McMaster, McLaughlin or Adams and Trent); fourth semester, *The History of the United States*, or *Civil Government*, (Fiske's *Civil Government*, or Andrews's *Manual of the Constitution*.)

Instead of the first two semesters' work in history indicated above, which is preferred, the University will accept for the present two semesters' work in general history from one of the following text-books: Myers, Fisher, Freeman, Colby, or West.

7. CIVICS—As indicated in the preceding paragraph at least one semester's work should be presented in civics, following where possible, elementary work in the grammar school. This work in civics should preferably follow at least a part of the work in history. (Fiske's *Civil Government* or Andrew's *Manual of the Constitution*.)

8. ECONOMICS—(a) A half year's work on the principles of political economy as presented in the following text-books will be accepted: J. Laurence Laughlin's *Elements of Political Economy* (American Book Co.); Francis A. Walker's *First Lesson in Political Economy* (Henry Holt & Co.); or (b) Industrial history and the elements of eco-

conomic theory studied on the basis of an outline like Henry W. Thurston's *Economics and Industrial History for Secondary Schools* (Scott, Foresman & Co.); or Frederick R. Clow's *Introduction to the Study of Commerce* (Silver, Burdette & Co.)

GROUP IV—MATHEMATICS

9. ALGEBRA—The algebra of the high school should comprise a careful study of the following topics: signs and symbols; fundamental operations; factoring (including lowest common multiple and highest common divisor); fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); ratio and proportion. Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the formal statement of algebraic problems. The interpretation of algebraic results with their graphical representation should be introduced at the earliest possible stage and constantly insisted upon.

Three credits, representing at least one and a half years' work with daily recitation, are required in algebra.

10. GEOMETRY—Plane geometry is required for admission to all courses. Provision is made for teaching solid geometry in the University but credit will be allowed for the work if satisfactorily completed in the high school.

In beginning the study of geometry the "heuristic" method is recommended (see Hopkin's *Manual of Plane Geometry*, D. C. Heath & Co.; Spencer's *Inventional Geometry*, American Book Co.; Campbell's *Observational Geometry*, Harper & Brothers). Whatever method is used the pupil should be provided with adequate drawing instruments and should construct and verify all of his positions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations should not simply be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of geometry is not to be lost sight of, but the work should be so arranged that it may be of the

highest disciplinary value. The language of all geometrical exercises should be exact.

Two credits, representing at least one year's work with daily recitation are required in plane geometry. A third semester may be devoted to solid geometry.

11. **ARITHMETIC**—The work in arithmetic should in general be completed in the grammar grades. A half year's work in arithmetic and algebra may be done with great profit in the high school after the completion of the required work in algebra and geometry. Not only will a general review of the subjects be found beneficial in itself, but the higher point of view now attainable may be taken advantage of in many ways.

In addition to the five credits in algebra and geometry, one credit for advanced work in arithmetic, and one credit for work in bookkeeping (by double entry) will be accepted as part of the elective credits.

It is desirable that the high school work in mathematics be not finished until the end of the course, in order that there may be no break in the continuity of the work between the high school and the University.

GROUP V—SCIENCE

Work in the sciences named below will be accepted in partial fulfilment of the requirements for admission, provided that the student has given to each subject offered not less than the time indicated in the table below. The subjects are arranged in order of preference.

Beginning with September, 1906, two semesters' work in chemistry with adequate laboratory facilities and regular laboratory work by the pupils will be required for credit.

- | | |
|-------------------------------------|--------------------------|
| 1. Physics, 36 weeks; | 4. Physiology, 18 weeks; |
| 2. Botany, 18 weeks; | 5. Chemistry, 36 weeks; |
| 3. Physical geography,
18 weeks; | 6. Zoology, 18 weeks. |

12. **PHYSICS**—One full year should be given to the study of physics. Of this time a considerable portion should be devoted to experiments and observations by the pupil. One of the chief aims of the course in physics

should be to train pupils in accurate and impartial observation, and to develop independent judgment rather than to impart knowledge of a large number of facts. Constant use should be made of problems in which the pupil may apply the mathematics he has already mastered. A laboratory, equipped with simple apparatus, is necessary for a satisfactory presentation of the subject and training of the students.

Among the good text-books and manuals are: Carhart and Chute's *Elements of Physics* (Allyn & Bacon); Geo. A. Hoadley's *A Brief Course in Physics* (American Book Co.); Charles B. Thwing's *An Elementary Physics* (Benj. H. Sanborn & Co.); Rowland and Ames's *Elements of Physics* (American Book Co.); Hall & Bergen's *A Text Book of Physics* (Henry Holt & Co.)

13. BOTANY—The aim should be to make pupils familiar with the local flora, especially in its economic aspects. The habit of accurately observing and then carefully recording should be established from the first. Probably a carefully kept note book will be found much better than an herbarium.

The following text-books are suggested as suitable for the guidance of study in elementary botany: Macbride's *Lessons in Elementary Botany* (Allyn and Bacon); Coulter's *Plant Relations* (D. Appleton & Co.); Bergen's *Botany*; Barnes' *Outlines of Plant Life* (Henry Holt & Co.); Bailey's *Lessons With Plants* (The Macmillan Co.); Leavitt's *Outlines of Botany* (The American Book Co.); Coulter's *Plant Structures* (D. Appleton & Co.); Atkinson's *Elementary Botany* (Henry Holt & Co.); Stevens' *Introduction to Botany* (D. C. Heath & Co.)

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

14. PHYSICAL GEOGRAPHY—The pupil should gain a knowledge of the simpler facts and principles of the mathematical geography, such as the relations of the members of the solar system, the form and movements of the earth, the phases of the moon, etc.; the atmosphere, the atmospheric phenomena, such as winds, temperature, precipita-

tion, etc., and their causes; the evolution of the land forms, including the modifying agencies and their mode of operation; the ocean, its movements, their causes, their effects upon climate and life; the life of the ocean; the effect of climate and topography on human activity, etc.

The following text-books are recommended: Dryer's *Lessons in Physical Geography* (American Book Co.); *Introduction to Physical Geography*, by Gilbert & Brigham (Appletons); *Elementary Physical Geography*, by W. M. Davis (Ginn & Co.); *Physical Geography*, by W. M. Davis (Ginn & Co.); *Elementary Lessons in Physical Geography*, by A. Geikie (The Macmillan Co.); *Elementary Physical Geography*, by R. S. Tarr (The Macmillan Co.); The *Topographic Atlas of the United States, Physiographic Types*, Folia I, II, and III, published by the United States Geological Survey, at twenty-five cents each are very valuable for class exercises. The following books are excellent for reference: *The Teaching of Geography*, by A. Geikie (The Macmillan Co.); *The Realm of Nature*, by R. H. Mill (Chas. Scribner's Sons); *Earth Sculpture*, by Jas. Geikie (G. P. Putnam's Sons); *Geography of the Region of Devil's Lake and the Dalles of the Wisconsin*, by R. D. Salisbury and W. W. Atwood, published by the Wisconsin Geological Survey, E. A. Birge, Director, Madison, Wisconsin; *Government Maps for use in Schools*, by Davis, King, and Collie (Henry Holt & Co.); the county reports published by the Iowa Geological Survey will furnish valuable aid in field work. The local field should be used for illustration as far as possible. Maps, globes, physiographic models, etc., are indispensable to the efficient teaching of this subject. The Rand-McNally Company of Chicago, publishes an excellent series of physical maps of the continents and oceans.

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

15. **PHYSIOLOGY**—For preparation in physiology, the method of study should combine certain work of a practical nature with lessons from the text-book. This practical work should embrace the observation of general physiological phenomena through experiments so simple that the

pupil can make most of them, supplemented by demonstrations in anatomy and microscopy carefully prepared by the teacher. Expensive apparatus is not only unnecessary for this work, but it is really out of place. Even the microscope should be used only as an occasional accessory to what the pupil may observe with unaided vision. The keeping of notes and sketches, recording clearly and systematically the more important observations, should accompany the course throughout.

The following text-books are recommended as indicating the scope of acceptable preparatory work: Colton's *Physiology, Briefer Course* (D. C. Heath & Co.); Martin's *Human Body, Briefer Course*, revised by Fitz (Henry Holt & Co.); Blaisdell's *Practical Physiology* (Ginn & Co.); Foster & Shore's *Physiology for Beginners* (The Macmillan Co.); Macy's *Physiology for High Schools* (American Book Co.)

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations and laboratory exercises per week for half the school year.

16. CHEMISTRY—Emphasize facts rather than theories and make clear the distinction between them. Great care should be taken that the pupils are not left with the impression that formulas or equations control the phenomena instead of being merely their expression. Laboratory work is regarded as essential to an understanding of the subject. The experiments should be simple, and the inferences from them as direct as possible.

No credit will be given for work in this branch in schools where there is no laboratory whatever. Chemistry should be omitted from the high school course except in those schools where adequate laboratory facilities are available for individual laboratory work continuing throughout one year. *Elements of Chemistry*, Remsen (Henry Holt & Co.); *School Chemistry*, Waddell, (Macmillan); *Elementary Chemistry*, Clark and Dennis, (American Book Co.); *Essentials of Chemistry*, Hessler and Smith, (B. J. Sanborn & Co.), are recommended as suitable text-books for use in secondary schools.

The minimum time to be devoted to chemistry in order

to receive credit should be one year of daily laboratory work.

17. **ZOOLOGY**—Elementary zoology should deal principally with the easily ascertained facts concerning some few animal forms. It is therefore recommended that the general anatomy and life histories of some typical groups of animals be made the subject of the study, and that the aim be the acquisition of the habit of correct observation and a definite knowledge concerning a few animals, rather than the learning of classification and a superficial knowledge of the animal kingdom as a whole.

Directions for laboratory work are found in most textbooks. Money for this purpose should be expended in plain but convenient tables, good dissecting microscopes, and a few cheap tools rather than in expensive compound microscopes.

Pupils should be induced to examine carefully, and to make the most of each specimen. They should be encouraged to ask questions, and to find the answer for themselves as far as practicable.

The following text-books indicate the character and extent of the preparatory work in zoology which will be accepted: *Practical Zoology*, Colton, (D. C. Heath & Co.); *School Zoology*, Burnet (American Book Co.); *Lessons in Zoology*, Needham (American Book Co.); *Animal Life*, Jordan (D. Appleton & Co.)

The minimum time to be devoted to zoology in order to receive credit for admission to the University should be one hour's laboratory work daily for a half year. This should be supplemented by field work and reading under the direction of the teacher.

COURSES OF STUDY

COURSE OF STUDY LEADING TO THE DEGREE OF BACHELOR OF ARTS

Freshman Year (EACH SEMESTER)

English,		2 hours
French 5; German 5; Greek 5; Latin 4		5 or 4 hours
Elective	Mathematics (see note 2) 4	8 or 9 hours
	History; government and economics,—(one only) 4	
	Animal biology; botany; chemistry; zoology,—(one only) 4	
	Additional foreign language (see note 3) 4 or 5	
		14 or 15 hours

Sophomore Year (EACH SEMESTER)

English		3 hours
Elective, not more than six hours in one department (see note 4)		12 hours
		15 hours

Junior and Senior Years

REQUIRED: a major study in some one department, extending through the two years, and equivalent to at least four hours during each of the four semesters; with the approval of the department in charge of the major, the required study may be extended into an allied department (see note 4).

NOTES

1. For the degree, credits to the number of 124 semes-

ter-hours are required, or 120 semester hours exclusive of credits gained for military drill or physical training.

2. Mathematics is prerequisite to the regular work of physics, and to the advanced work of chemistry and commerce; if it be the purpose later to enter upon any of these studies, mathematics should be elected in the first year.

3. Not more than nine hours of foreign language may be carried in either semester of the first year.

4. In the entire course, work to the extent of twelve semester-hours must be completed in each of the two groups in which the major study does not fall. For the purposes of this requirement, the several departments of instruction are grouped as follows:

GROUP I	GROUP II	GROUP III
English	Classical archeology	Animal biology
French	Education	Astronomy
German	History	Botany
Greek	Philosophy	Chemistry
Latin	Political economy	Geology
Public speaking	Political science	Mathematics
Sanskrit	Psychology	Physics
Scandinavian	Sociology	Zoology
Spanish, Italian		

GENERAL AND SPECIAL COURSES IN THE SCHOOL OF POLITICAL AND SOCIAL SCIENCE

To guide students who propose to elect all or a considerable portion of their undergraduate work in the School of Political and Social Science, one general and four special courses have been arranged leading to the degree of Bachelor of Arts.

- I. The general social science course.
- II. The course in commerce.
- III. The course in government and administration.
- IV. The course in modern history.
- V. The course in practical philanthropy.

GENERAL SOCIAL SCIENCE COURSE

Freshman Year

(EACH SEMESTER)

Requirements as laid down for the first year in the course leading to the degree of Bachelor of Arts.

Sophomore Year

EACH SEMESTER

English, 3 hours; elective, 6 to 9 hours in economics, politics, and history; and from 3 to 7 hours in psychology, language, or science. At least four hours of mathematics or science must be elected in this or a subsequent year in addition to the eight hours of mathematics taken in the freshman year to fulfill the requirements for the Bachelor of Arts degree.

Junior and Senior Years

A large part or all of the work of these years may be taken in history, political science, political economy and sociology. Students should advise with heads of departments or with the Director of the School of Political and Social Science concerning the order and grouping of their electives. Each student will be held responsible for exercising his right of election, in accordance with the requirements for the Bachelor of Arts degree stated above.

COURSE IN COMMERCE

FIRST YEAR

<i>First Semester</i>		<i>Second Semester</i>	
English		2	
Foreign language		4 or 5	
Mathematics		5 or 4	
Actual gov't (Pol. 3)	4	Indus. Hist. (Ec. 4)	4

COURSE IN GOVERNMENT

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SECOND YEAR

English	3		
Principles of economics or economic history	3	Economic History or Prin- ciples of economics	3
Resources of nations	2		
Chemistry	4		
Foreign language, history or Science	3 or 4		

THIRD YEAR

Money and banking	3	Public finance	3
Corp., finance and acc't'g	3	Transportation	3
Statistics	2	Statistics	2
Labor problem	2	Labor problem	2
Foreign language, history, or other science	4 or 5		

FOURTH YEAR

Commercial policies	5	Commercial relations	5
Contracts	3	Agency	2
Bills and notes	2	Partnership	2
Taxation	2	Insurance	2
Elective	4 or 5	Comparative state legisla- tion	3
		Elective	2

COURSE IN GOVERNMENT AND ADMINISTRATION

FRESHMAN AND SOPHOMORE YEARS

The same as in the General Social Science Course, but that the student is advised to elect Actual Government in the freshman year and the Introduction to Political Science in the sophomore year.

JUNIOR YEAR

<i>First Semester</i>		<i>Second Semester</i>	
Political parties	3	Contemporary state legis- lation	3
Municipal Gov.	2	Colonial government	2
Money and banking	3	Public finance	3
Statistics	2	Statistics	2
American history	3	American history	3
The labor problem	2	The labor problem	2

SENIOR YEAR

Jurisprudence	3	Constitutional law	3
Administrative law	2	Administrative law	2
International law	3	Sociology	3
American political theory	2	American political theory	2
Commercial policies	5	Commercial policies	5

COURSE IN MODERN HISTORY

FRESHMAN AND SOPHOMORE YEARS

The same as in the General Social Science Course.

JUNIOR YEAR

<i>First Semester</i>		<i>Second Semester</i>	
English history	3	English history	3
The renaissance and the reformation	2	Historical research and criticism	2
Political Parties	3	Comparative state legislation	3
Municipal government	2	Colonial government	2
Money and banking	3	Public finance	3
Elective	5	Elective	5

SENIOR YEAR

American history	3	American history	3
Modern European History	2	Modern European history	2
International law	3	Introduction to sociology	3
Jurisprudence	3	Constitutional law	3
Historical seminary	2	Historical seminary	2

COURSE IN PRACTICAL PHILANTHROPY

FRESHMAN AND SOPHOMORE YEARS

The same as in the General Social Science Course.

JUNIOR YEAR

Social amelioration	4	Sociology	4
Psychology	3	Psychology	3
Modern history	3 or 2	Modern history	3 or 2
Ethics	2	Ethics	2
Elective	4 or 5	Elective	4 or 5

SENIOR YEAR

Anthropology	3	Crime and charities	3
Distribution of wealth	3	Social legislation	3
Statistics	2	Statistics	2
Abnormal psychology	2	Administrative law	2
Education	4 or 5	Education	4 or 5

SPECIAL COURSE IN PREPARATION FOR THE
STUDY OF LAW

First Year

First Semester

Second Semester

English	2
Foreign Language	4 or 5
Greek history or	Roman history or
Industrial history.....4	Actual government.....4
Mathematics or Science	4 or 5

Second Year

English	3
Economics, politics and history	6 to 8
Mathematics or Science	2 to 4
Psychology, language or additional science	3 to 5

Total must not exceed 16

Third Year

History, Economics, Politics, Sociology
8 or 9

Logic	2	Ethics	2
Science, Language		5 or 6	

Fourth Year

Work in the College of Law as provided for in the combined Liberal Arts and Law course.

COURSE RECOMMENDED BY THE CLASSICAL GROUP

For students who propose to work in literature, in history, or in philosophy, and in particular for students who are preparing to be teachers of Latin, the classical group of the faculty recommend what has been known as the

Classical Course. In this course students should elect as freshmen Greek 5 hours and Latin 4 hours; as sophomores, Greek 5 hours (second year Greek); and before graduation they should complete two years' work in either French or German.

SUGGESTED COURSES FOR TEACHERS

DEFINITE PREPARATION NECESSARY

Students expecting to teach should make definite preparation for the work by properly selecting and grouping their University courses. Experience of several years in placing teachers has shown that those who have not made suitable preparation find themselves handicapped in securing a position; and what is more important, in filling it efficiently. Superintendents are making demands for trained teachers and in the larger cities they will take no others.

The following suggested conditions may readily be fulfilled as a part of the requirements for the Bachelor of Arts degree:

GENERAL WORK

Because of the variety of work which every beginning teacher is required to do, and because of state certificate requirements, at least elementary university courses should be taken in not less than five subjects which are taught in the high schools.

SPECIALIZED WORK

Each teacher should have special and extended preparation in two or three subjects. Experience has shown that the following combinations are most frequently demanded: Latin, German; English, German; English, history, civics; English, Latin, history; mathematics, physics, chemistry; physics, chemistry; botany, zoology, physiography. In the largest schools Greek is sometimes given with Latin; and French with German. One teacher is frequently required

to teach all the sciences. Public speaking is desirable as a part of the preparation for English.

PROFESSIONAL EDUCATION

Professional training is as necessary for the teacher as for the physician, lawyer or engineer. The best superintendents demand teachers with professional equipment. The minimum taken should include:

Education, 12 semester hours.

Psychology, 6 semester hours.

The psychology should generally precede the work in education. For the present this is not absolutely required. It is also very desirable that a course in biological work should precede the work in education.

SPECIAL CERTIFICATE

For information concerning special certificates in education see page 113.

***MILITARY SCIENCE AND TACTICS**

Instruction in these branches, both theoretical and practical, is required of all male students of the freshman and sophomore classes and of all unclassified male students during their first and second years, unless such students are specially excused. If such students are excused they are required to register for physical training during the period for which the excuse is granted.

PHYSICAL TRAINING

The University requires a physical examination of every student on entrance, without cost to the student. Each student will then be assigned to such physical training as the report of the examination warrants. For the women two years of physical training is required and is

* For specific requirements and all particulars consult "Military Science," and "Physical Training" in this announcement.

provided for in a gymnasium especially fitted for this purpose and opened in October, 1904. For the use of the men of the University there was opened in February, 1905, a large new Armory and Athletic Pavilion with room for indoor drill and completely equipped with the most modern running track and gymnasium apparatus.

REGULAR STUDENTS

All students, except as provided under "unclassified students," must follow the course of study outlined above in the order prescribed, carrying not more than sixteen and not less than fourteen hours of lectures or recitations a week, except as required by the programme, or permitted by the faculty.

UNCLASSIFIED STUDENTS

1. Persons twenty-one years of age, not candidates for a degree, may be admitted as unclassified students without examination, and may pursue studies at the discretion of the faculty on the recommendation of the professors in charge of the subjects chosen.

2. Such students of the professional colleges as are allowed to carry additional work in this college, not candidates for a degree in this college, will be recorded as "unclassified." If students of either of these classes become candidates for a degree in the College of Liberal Arts, they will be required to furnish evidence, by examination or acceptable certificate, of having completed the preparatory requirements.

3. Persons under twenty-one years of age not candidates for a degree, admitted to the college without conditions, whose reasons for irregular work are approved by the faculty, may be registered as "unclassified."

4. Unclassified students are subject to the same requirements as regular students as to amount of work to be carried, examinations, and scholarship.

COMBINED LIBERAL ARTS AND PROFESSIONAL COURSES.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. A. IN THE COLLEGE OF LIBERAL ARTS AND TO THE DE- GREE OF LL. B. IN THE COLLEGE OF LAW

Students of the College of Liberal Arts who have fully completed their junior year, and who have satisfied the specific requirements for the degree of Bachelor of Arts, except as here specified, may be enrolled in the College of Law and receive credit for one year's time of law study while completing their senior year in the College of Liberal Arts, by complying with the following conditions: They must schedule for ten hours a week in the College of Law in the subjects of the first year, given throughout the year at eight and nine o'clock, and practice court by appointment; and for five hours in the College of Liberal Arts selected from the group of subjects embracing political and social science, including political and institutional history. This privilege is not extended to undergraduates of other colleges who enter the College of Liberal Arts of this University with the rank of senior.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. S. IN THE COLLEGE OF LIBERAL ARTS, AND TO THE DEGREE OF M. D. IN THE COLLEGE OF MEDICINE OR THE COLLEGE OF HOMEOPATHIC MEDICINE

(The requirements for admission to this course pertain to the College of Liberal Arts, not to the professional college.)

FIRST YEAR (EACH SEMESTER)

German or French	5 hours
English	2 hours
Mathematics	4 hours
Animal biology	4 hours
	<hr/>
	15 hours

SECOND YEAR**(EACH SEMESTER)**

English*	3 hours
Physics	4 hours
Animal biology	4 hours
Botany or zoology	4 hours
	<hr/>
	15 hours

THIRD YEAR**(EACH SEMESTER)**

German or French*	3 hours
Chemistry	6 hours
Human anatomy in the College of Medicine	4 hours
Human physiology in the College of Medicine	3 hours
	<hr/>
	16 hours

FOURTH, FIFTH, AND SIXTH YEARS

Medical work exclusively.

NOTES

1. The degree of B. S. will be conferred at the end of the fourth year; the degree of M. D., at the end of the sixth year if the work has been completed.

2. This course must be pursued as here outlined, no substitutions or changes in the order of studies being permitted, except that the starred (*) English and foreign language may be transposed.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. S.
IN THE COLLEGE OF LIBERAL ARTS, AND TO THE DE-
GREE OF D. D. S. IN THE COLLEGE OF DENTISTRY

(The requirements for admission to this course pertain to the College of Liberal Arts, not to the College of Dentistry).

COMBINED COURSES ,

111

FIRST YEAR (EACH SEMESTER)

German or French	5 hours
English	2 hours
Mathematics	4 hours
Animal biology	4 hours
	<hr/>
	15 hours

SECOND YEAR (EACH SEMESTER)

English*	3 hours
Physics	4 hours
Animal biology	4 hours
Botany or zoology	4 hours
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	15 hours

THIRD YEAR (EACH SEMESTER)

German or French*	3 hours
Chemistry	4 hours
Elective in the College of Liberal Arts	8 hours
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	15 hours

FOURTH YEAR (EACH SEMESTER)

Chemistry	3 hours
Human anatomy	4 hours
Human physiology	3 hours
Freshman dental laboratory work	5 hours
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	15 hours

FIFTH AND SIXTH YEARS

Dental work exclusively.

NOTES

1. The degree of B. S. will be conferred at the end of the fourth year; the degree of D. D. S., at the end of the sixth year if the work has been completed. This course must be taken as here outlined, except that the starred (*) English and foreign language may be transposed.

2. Students of marked ability may shorten this course to five years by taking electives in the College of Liberal Arts during successive summer sessions.

COURSE PREPARATORY TO THE STUDY OF THEOLOGY

First and Second Years

The regular Bachelor of Arts course.

First Year

Second Year

Plato—3 (Seneca—2)

Psychology—3

Logic and ethics—2

Economics—3

Elective—5

New Testament Greek—3

History of philosophy—3

Sociology—3

Elective—6

BACCALAUREATE DEGREES.

For each of the courses of study leading to a bachelor's degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the faculty, the following degrees are conferred:

Bachelor of Arts upon those who complete the four years' course in the arts and sciences.

Bachelor of Science upon those who complete either of the engineering courses, the course in forestry, or the first four years of either of the combined courses in medicine, homeopathic medicine, and dentistry.

SPECIAL CERTIFICATES IN GERMAN, FRENCH, ENGLISH AND LATIN

Special certificates as to scholarship in German, in French, in Latin, or in English will be granted under the authority of the faculty of the College of Liberal Arts on the following conditions:

1. They shall be issued to students of this University on or after graduation only.

2. They shall be in the nature of an authorized guarantee as to scholarship in German, in French, in Latin, or in English.

3. They shall be issued only after *at least* three years of full work (to represent *five* hours of lectures and recitations a week or an equivalent) in one of these subjects.

4. Candidates must pass a final examination in the subject in which the certificate is desired.

5. The examination must be conducted by the professor in charge of the subject, assisted by such other instructors as may be agreed upon by him and the President of the University.

6. These certificates will be signed by the President and by the professor immediately concerned.

TEACHERS' CERTIFICATES IN EDUCATION

Students who have completed the following work and who have met the other requirements stated shall be awarded a Teacher's Certificate in Education:

(1) Twelve semester hours in education, including the courses in the principles of education and in child study.

(2) Six semester hours in psychology.

(3) All other requirements for the degree of Bachelor of Arts in the College of Liberal Arts in this University.

(4) The recommendation by the department of education and the vote of the faculty upon the basis of superior work, apparent aptitude for teaching and the fulfilment of all other requirements.

NOTE:—This certificate may also be awarded to graduate students who complete the work in education and in psychology and who receive the recommendation of the department of education and the vote of the faculty.

STATE CERTIFICATES

According to the state regulations in Iowa, "Graduates of the College of Liberal Arts of the State University who

have pursued in addition to the course in psychology, a pedagogical course of at least one year will be admitted to the examination (for state certificate) upon filing certified statements given by the president or registrar of their graduation and of their record in the pedagogical course." (Regulations by the Board of Educational Examiners, June, 1905, page 4.)

OUTLINE OF THE PLAN OF INSTRUCTION

NOTE—*Additional courses in almost all departments are offered in the Summer Session. The announcement of the Summer Session will be sent on application to the President of the University.*

SANSKRIT

PROFESSOR POTTER

The courses in Sanskrit are intended to afford a general introduction to Indo-European comparative grammar and to lay the foundation for future reading in the literature and philosophy of the ancient Hindus.

For additional courses in Indo-European grammar see Greek, course 35 (36); Latin, course 35 (36), German courses 11-16, 19; Scandinavian, courses 9 (10), (14), 17, (18), (20); English, courses 87 (88), 79, (80), 81, 82, 73.

*1. Sanskrit grammar and the reading of easy selections from the Nala. Letters on Sanskrit phonology.

First semester; Tu., Th.

2. Introduction to the Veda. Lectures on Hindu history and literature.

Second semester; Tu., Th.

A supplementary reading course for the purpose of drill in vocabulary and grammatical forms is offered in the summer session.

* Courses with odd numbers are given in the first semester, those with even numbers in the second semester. Where a course runs through the year it receives a double number, e. g. 1 (2); the whole course is designated in the calendar by the first number, but on the registrar's books each half of the course is designated by its own number.

LATIN LANGUAGE AND LITERATURE

PROFESSOR CURRIER; PROFESSOR POTTER, PROFESSOR FAIRBANKS, MR. FITCH, MISS PRENTISS

A. ELEMENTARY COURSES

3 (4). CICEO—Selected orations. Mr. FITCH.

Tu., Wed., Th., Fri., at 1:30.

5 (6). VERGIL—*Æneid*. Professor FAIRBANKS and Miss PRENTISS.

Tu., Wed., Th., Fri., at 1:30.

7 (8). LIVY, CICEO, HORACE AND TERENCE—First semester: Livy, selections from Books I, XXI, and XXII; Cicero, *De Senectute* or *De Amicitia*. Second semester: Horace, *Odes*; Terence, *Phormio*; outline of Roman Literature. Grammar, writing Latin, and sight reading during the year. Those who show marked proficiency in writing Latin during the first semester are allowed an option of easy Latin, Cicero and Aulus Gellius, to be read under the direction of the instructor during the rest of the year. Professor POTTER.

Tu., Wed., Th., Fri., at 8:00, and Mon., Tu., Th., Fri., at 9:00.

9 (10). PLINY AND TACITUS—Selected Letters of Pliny. Tacitus, *Germania*, and *Agricola*. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Prerequisite, course 7 (8). Professor CURRIER.

Mon., Wed., Fri., at 9:00.

11 (12). CICEO AND HORACE—Cicero, *Tusculan Disputations*; Horace, *Satires and Epistles*. These courses are mainly occupied with the literary side of the authors studied. Professor CURRIER.

Prerequisite, course 7 (8).

Tu., Th., at 9:00.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

13 (14). CICEO, QUINTILIAN, AND TACITUS—Cicero, *De Officiis*. Quintilian, Books X and XII. Tacitus, *De Ora-*

toribus. Particular attention will be paid to philosophy and to literary criticism as exemplified in these authors. Professor CURRIER.

Prerequisite, course 9 or 11.

Tu., Th., at 8:00. *Not given in 1906-1907.*

15 (16). TACITUS AND SENECA—Tacitus, selections from the *Annals*. Seneca, *Morals and Letters*. Professor CURRIER.

Prerequisite, course 9 or 11.

Tu., Th., at 8:00.

It is expected that either 13 (14), or 15 (16) will be taken by all students choosing their major in Latin.

17. PLAUTUS—In this course the metres are carefully studied and some attention is given to the ante-classical forms and constructions; but as provision is made in other courses for a more systematic study of the language, the attention is directed mainly to the Roman stage, and to contemporary and later Roman playwrights. The *Captivi*, *Trinummus*, *Menaechmi*, and *Rudens* are read together with selected scenes from the *Amphitruo*, *Miles Gloriosus*, and *Mostellaria*. The analysis of several other plays is given in informal lectures. Professor FAIRBANKS.

First semester; Mon., Wed., Fri.

18. LUCRETIVS AND CATULLUS—The aim is to study Lucretius's art rather than his philosophical system. All the more poetic passages in the *De Rerum Natura* are read. In this course, and also in course 23, considerable attention is given to the structure of the verse, and to the reading of it. Catullus is studied particularly in his relation to his successors in lyric, epic, elegiac, and epigrammatic poetry. Professor FAIRBANKS.

Second semester; Mon., Wed., Fri.

19. CICERO'S LETTERS—As students before taking this course will have acquired considerable facility in reading Latin, the attention will be directed to the importance of the letters as historical documents. A large number of letters will be studied, selected with reference to the light that they throw on the many sided character of the orator, and also on the social and political conditions that prevailed at

Rome at the end of the Republican period. Professor FAIRBANKS.

First semester, Mon., Wed., Fri.

Not given in 1906-1907.

20. LUCAN, *Pharsalia*; SENECA, *Medea*—The reading of the *Pharsalia* is supplemented with selections from Caesar's *Civil War* and Suetonius's *Lives*. Lectures introductory to the *Medea* treat of the Roman tragic writers who preceded Seneca, and an effort is made to show the relation of the Roman to the Greek plays. Professor POTTER.

Not given in 1906-1907.

Second semester, Mon., Wed., Fri.

21. ELEGIAC POETS—After a brief study of the Greek Elegiac poets the class will read the best elegies of Tibullus, Propertius, and Ovid. The aim of the course is to trace the history of classical elegiac poetry from Callinus to Ovid. Professor POTTER.

First semester, Mon., Wed., Fri.

22. THE SATIRES OF JUVENAL; THE EPIGRAMS OF MARTIAL—The course will include incidentally a study of the private life and amusements of the Romans as set forth in these poems. Professor POTTER.

Second semester, Mon., Wed., Fri.

23. THE WORKS OF VERGIL—This course consists of literary studies covering Vergil's complete works, but most of the time is devoted to the *Aeneid*. Professor POTTER.

First semester; Mon., Wed., Fri., at 10:00.

Not given in 1906-1907.

24. HISTORY OF ROMAN ORATORY—The first part of the semester is devoted to a study of Roman oratory before Cicero. Cicero's *Brutus* and Cortese, *Oratorum Romanorum Reliquiae* are used. During the rest of the semester Cicero's orations for Roscius and against Verres are studied. Professor FAIRBANKS.

Second semester; Mon., Wed., Fri., at 10:00.

Not given in 1906-1907.

25. CICERO'S CAREER AS AN ORATOR—This course combines original historical investigation covering the period from the time of the Gracchi till the death of Cicero, with the study of the orations, all of which are considered in

chronological order. About thirty of the best speeches will be read by the class. The course includes a special study of the conspiracies of Catiline, based largely on Sallust, Asconius, and Cicero's Letters. Professor POTTER.

Prerequisite, courses 19, and 24 or 14.

Mon., Wed., Fri., at 10:00.

27 (28). CICERO, LIVY, AND OVID—Sight reading of suitable selections. Professor CURRIER.

Throughout the year; one hour a week.

30. TEACHER'S COURSE—This course combines theory, practice, and investigation. The members of the class serve as assistant teachers in a beginning Latin class, and investigate assigned problems. Prerequisite, course 23 or 25, and general psychology. Professor POTTER.

Five times a week; three hours' credit; second semester.

C. COURSES PRIMARILY FOR GRADUATES

33. EARLY LATIN—Metrical inscriptions and fragments of the poets. Professor POTTER.

First semester; Tu., Th.

34. PETRONIUS AND LATE LATIN—The *Cena Trimalchionis*, Apuleius's *Cupid and Psyche*, and selections from the Christian Hymns. On the linguistic side considerable attention is given to the language of the common people and its relation to the Romance tongues. Professor POTTER.

Second semester; Tu., Th.

35. HISTORICAL LATIN GRAMMAR: SOUNDS AND INFLECTIONS—This course will be based on the reading of inscriptions selected for their linguistic interest and arranged chronologically from the earliest times, to the seventh century, A. D. Each member of the class is assigned some definite problem to investigate and report upon. Professor POTTER.

First semester; Tu., Th.

Not given in 1906-1907.

36. LATIN SYNTAX—Introduction to the study of historical syntax. Professor POTTER.

Second semester; Tu., Th.

Not given in 1906-1907.

39 (40). **ADVANCED COMPOSITION**—This course is based largely on material found in Caesar. Professor POTTER.

Throughout the year; Mon., at 11:00.

The instructors of the Latin department meet fortnightly throughout the year to read in course and discuss informally the entire works of some author or period. Advanced graduate students in Latin will be invited to participate in these meetings.

The department is supplied with mounted photographs and lantern slides for the illustration of lectures.

For courses in Roman Antiquities and Archeology see Courses 31 (32), 37 (38), under Classical Archeology.

SPECIAL CERTIFICATES IN LATIN

Candidates for Teachers' certificates in Latin are expected to complete the following courses before graduation:

Freshman Year, 8 (9), Livy, Horace, Terence.

Sophomore Year, 9 (10), Pliny, Tacitus.

Junior Year, 19 (24), Cicero or 17 (18), Plautus, Lucretius, Catullus, and 31 (32), Roman Life (unless this course is taken in the Sophomore Year.)

Senior Year, 23 Vergil or 25 Cicero, and 30 Teachers' course, and 39 (40) Advanced Composition (unless this course has been taken in junior year.)

The other conditions to be met by candidates for these certificates are set forth under "Baccalaureate Degrees."

CLASSICAL ARCHEOLOGY

ART; HISTORY; ANTIQUITIES

The following courses do not require a knowledge of Greek. They are open to all students except freshmen.

Greek 13 (14). **OLD GREEK LIFE**—Lectures, illustrated with lantern slides, books on art, etc. Collateral reading in English and examinations are required of the students; references are also given to the important works in French and German for those who can use these languages. The lectures will treat of the characteristics of the land and the people; the Greek house, dress and mode of life; marriage

and funeral customs; markets and trade generally; the duties of citizens in peace and war, etc. Professor FAIRBANKS.

Two hours a week; throughout the year.

Omitted in 1906-1907.

Latin 31 (32). ROMAN LIFE—This course follows the same lines as the preceding course in Greek life. Ordinarily it should be preceded or accompanied by the course in Pliny and Tacitus (Latin 9). Professor FAIRBANKS.

Tu., Th., at 3:30; throughout the year.

Omitted in 1906-1907; given in 1907-1908.

Greek 21 (22). GREEK ART—First semester; Sculpture. The work will be based on Gardner's Handbook of Greek Sculpture. The collections of casts, photographs, and lantern slides are used in connection with each exercise.

Second semester: Architecture, vase-painting, and the minor arts. The student is made acquainted with the more important extant Greek and Roman buildings, and with the principles of architecture. For the study of vase-painting the library is specially well equipped; the lectures deal both with the development of technique, and with the scenes from Greek mythology and Greek life which are depicted on vases. Professor FAIRBANKS.

Mon., Wed., Fri., at 3:30; throughout the year.

NOTE. On Friday the more important monuments of Greek art are discussed chronologically in illustrated lectures. Students wishing an outline of the subject are permitted to register for this one hour as 27 (28) a.

Latin 37 (38). ROMAN RELIGION—Lectures on the nature of the gods, forms of worship, divination, belief in the future life, and on the different stages in the development of Roman religion. Professor FAIRBANKS.

Th., at 2:30; throughout the year.

This course is identical with course 29 (30) offered by the department of philosophy.

Two hours a week.

A lantern in the lecture room makes the large series of lantern slides available at any time to illustrate the work of the classes.

GREEK LANGUAGE AND LITERATURE

PROFESSOR FAIRBANKS; PROFESSOR CALL

The first two courses in Greek are intended to give the student an accurate knowledge of forms, syntax, and vocabulary, such that in the more advanced courses he can read with comparative ease and appreciate the character of the literature he is studying. While the first aim of all the work in the department is an accurate knowledge of the Greek language, it is not treated as a dead language, and every student is taught to feel that this work brings him into real contact with a people whose thought and literature and art have inspired much of what is best in our own civilization.

A. ELEMENTARY COURSES

Courses 5 to 8 are open to those who have completed course 4.

1 (2). BEGINNING GREEK—A course in beginning Greek is offered to students who desire by a special effort to acquire in one year the ability to read simple Attic prose. Goodwin's *Greek Grammar* and White's *First Greek Book* are used in the first semester; during the second semester three books of Xenophon's *Anabasis* are read. Professor CALL.

Daily at 11:00; throughout the year.

3 (4). XENOPHON; PLATO; HOMER—During the first four weeks the work in Xenophon is continued, and the principles of grammar reviewed. Plato's *Apology* and selections from his other writings occupy the remainder of the first semester. In the second semester Homer's *Odyssey* is read by the class, and lectures are given on Homeric times and on the character of the Greek epic. Professors CALL and FAIRBANKS.

Daily at 10:00; throughout the year.

5 (6). THE GREEK ORATORS—First semester: The earlier Greek orators; selections are read by the class and reports are given on orations which are not read in class;

lectures on the development of Greek oratory. Second semester: Demosthenes; the class reads the *Philippics* and the *Oration on the Crown* and individual members report on other orations. The special aim of the course is to introduce the class to the spirit of Greek oratory and to the technical methods of which it made use. Professor FAIRBANKS.

Mon., Wed., Fri., at 8:00; throughout the year.

NOTE. *Ordinarily course 5 and 7 are given in alternate years.*

7 (8). GREEK DRAMA, I: AESCHYLUS, PROMETHEUS BOUND; SOPHOCLES, ANTIGONE; EURIPIDES, ALCESTIS—In addition to the three tragedies studied in detail supplementary readings are required from other tragedies, and reports on the origin, literary form, and representation of Greek tragedy. Professor CALL.

Mon., Wed., Fri., at 8:00; throughout the year.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

11 (12). NEW TESTAMENT GREEK—A careful study of biblical Greek from the philological standpoint. Professor CALL.

Three hours a week.

This course will be given if called for by three or more students.

16. GREEK LITERATURE—An outline of the subject intended both for Greek students and for students not studying Greek. Professor FAIRBANKS.

One hour a week; second semester.

17 (18). GREEK PROSE COMPOSITION—A course intended to supplement the work in courses 5, 7, and 11. Professor CALL.

One hour a week; throughout the year.

19 (20). Courses for the critical study of one or two authors are organized for advanced students; ordinarily the entire extant works of an author are read, and selected portions are studied in detail. In 1904-1905 the subject of the course was Herodotus and the History of the Persian Wars; in 1905-1906 the author studied was Sophocles; in 1906-1907 probably the works of Plato and in particular the

Republic will be studied. Professors FAIRBANKS and CALL. Five hours a week; throughout the year.

NOTE. *Students are also permitted to register for three hours of this work (Mon., Wed., Fri.) as 19 (20) a.*

25 (26). GREEK GRAMMAR: SOUNDS AND INFLECTIONS—The course corresponds in aim and method to the course in Latin grammar (Latin 35). Professor POTTER.

One hour a week; throughout the year.

Given in 1905-1906; omitted in 1906-1907.

A class in the Greek New Testament will be organized by Professor Fairbanks, and all students of Greek are urged to join it. The class will meet once a week, and no registration is required. The writings of John will be studied in 1905-1906.

A Greek club, composed of instructors and graduate students, meets once a fortnight at the house of an instructor. Probably selections from the *Iliad* will be read in 1906-1907.

FRENCH LANGUAGE AND LITERATURE

ASSISTANT PROFESSOR BUSH; ASSISTANT PROFESSOR LE DAUM,
MISS VOSS, MR. HUIZINGA, MISS SUNIER

A. COURSES FOR UNDERGRADUATES

It is recommended that students begin French only after completion of the first year or first two years of Latin.

1. ELEMENTARY COURSE—I. Fraser and Squair's French Grammar, with exercises. II. Phonetics. III. Composition. IV. Translation. Miss Voss, Mr. HUIZINGA, Miss SUNIER.

First semester, four divisions daily. A fifth division of this course will be formed at the opening of the second semester.

2. ELEMENTARY COURSE (continued)—I. Translation of prose selections from modern French authors. II. Grammar, (advanced). III. Composition and conversation. Miss Voss, Mr. HUIZINGA, Miss SUNIER.

Second semester, four divisions daily, two of which will

be open to students in scientific, technical, or professional courses who have successfully completed course 1 or its equivalent.

26. **TECHNICAL FRENCH**—Rapid reading of selected articles from current scientific periodicals and technical works. Assistant Professor LE DAUM, Miss Voss, Mr. HUIZINGA.

Second semester, two divisions, for students in the technical departments who have completed course 1 or its equivalent successfully. Mon., Wed., Fri. Hours to be announced.

3 (4). **SOPHOMORE COURSE**—I. Translation of selections from recent French literature—(1) Short stories, (2) Modern comedies, (3) Lyrics. II. Grammar (review). III. Composition and conversation. Miss Voss, Mr. HUIZINGA.

Throughout the year, three divisions, Mon., Wed., Fri., at 10, 11, and 1:30.

5 (6). **SYNTAX, COMPOSITION, AND CONVERSATION**—(1) The principles of French syntax. (2) The writing and speaking of French on the basis of grammatical understanding. (3) Text Work—Grandgent's graded texts, and Le Daum's Syllabus. It is recommended that this course be taken with course 3 (4). It is required of candidates for the teacher's certificate in French with courses 1 (2) or 3 (4); 5 (6); 7 (8); 21 and 22. Miss Voss, Assistant Professor LE DAUM.

Throughout the year; Tu., Th., at 10:00.

30. **CONTEMPORARY FRENCH NOVELTIES**—Coppée, Loti, Anatole France, Margueritte, Bazin, etc. Rapid translation of selected books. Open to all students who have had course 3 (4) and wish merely to continue their French by reading. Miss Voss, Mr. HUIZINGA.

Second semester; Tu., Th., at 3:30.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

7 (8). **MODERN FRENCH LITERATURE**—I. Classicism (first semester). II. Romanticism (second semester). (1) Translation of selected works, (2) Conversation and (3) literary reviews based on Kastner and Atkins's Short History of French Literature (Holt). Open to students who

have had course 3 (4) or its equivalent. Assistant Professor LE DAUM.

Throughout the year; Mon., Wed., Fri., at 10:00.

NOTE. Students in French literature are requested to follow courses in modern French history and sociology. See the departments of history, courses 3, 13, (14), and political science, course 1 (2).

9 (10). THE FRENCH DRAMA—Representative works are read in class and lectures are given tracing the development of the drama in France from Corneille to Rostand. Assistant Professor BUSH, Assistant Professor LE DAUM.

Throughout the year; Mon., Wed., Fri., at 11:00.

Not given in 1906-1907.

11 (12). THE FRENCH NOVEL—Analysis and study of the principal modern French novels and short stories. Morillot's *Roman en France depuis 1610* is used as reference. Assistant Professor LE DAUM.

Throughout the year; Mon., Wed., Fri., at 11:00.

Not given in 1906-1907.

13. OLD AND MIDDLE FRENCH—A reading course in Old French verse and prose. The development of the language from Latin to Modern French is studied and attention is given to the life and ideas of the Middle Ages. Assistant Professor BUSH, Assistant Professor LE DAUM, Miss Voss.

First semester; Tu., Th., at 9:00.

Attention is called to course 34 in the department of Latin for students who would pursue this course satisfactorily.

Not given in 1906-1907.

14. MODERN FRENCH POETRY, FROM VILLON TO VERLAINE—A reading course based on Canfield's French lyrics, Masson's *Lyre française*, and De Banville's *Short Treatise on French Versification*. Assistant Professor BUSH, Assistant Professor LE DAUM, Miss Voss.

Throughout the year; Tu., Th., at 9:00.

17. CLASSIC FRENCH CRITICISM—Boileau, *L'Art Poétique*. Prerequisite, course 7. Assistant Professor LE DAUM.

First semester; Tu., Th., at 11:00.

18. MODERN FRENCH CRITICISM—From St. Beuve to

Faguet. Literary theories and selected works. Prerequisite, course 7 (8). Assistant Professor LE DAUM.

Second semester; Tu., Th., at 11:00.

19. **DE MUSSET**—Selected Comedies. Assistant Professor LE DAUM.

First semester; Th., at 11:00.

20. **ROSTAND**—"Cyrano de Bergerac" and other dramas. Assistant Professor LE DAUM.

Second semester; Th., at 11:00.

21. **TEACHER'S COURSE**—Methods and work. The "Report of the Committee of Twelve of the Modern Language Association of America." For students preparing to teach French and required of candidates for the teacher's certificate in French. For special teacher's certificate see the regulations pertaining to them on page 80. Assistant Professor LE DAUM.

First semester; Tu., at 2:30.

22. **COLLOQUIAL FRENCH**—Elements of conversation. Open to all students who have had course 1 or its equivalent. Assistant Professor LE DAUM.

Second semester; Tu., Th.

C. COURSES PRIMARILY FOR GRADUATES

23. **MOLIERE**—Selected plays for the study of Molière and phases of seventeenth century society. Prerequisite, course 7. Assistant Professor LE DAUM.

First semester; Mon., Wed., Fri., at 11:00.

15 (16). **SEMINAR IN VICTOR HUGO**—The "Bataille d'Hernani," and Romanticism. Prerequisite, course 7 (8). Assistant Professor LE DAUM.

Throughout the year; Th., 2:30 to 4:30.

24. **CORNEILLE**—Technique of his dramas before the "Querelle du Cid," and French society under Louis XIII. Prerequisite, course 7. Assistant Professor LE DAUM.

Second semester; Tu., Th., at 9:00.

25. **RONSARD AND THE FRENCH RENAISSANCE**—Selected works. Prerequisite, course 13 or 14. Assistant Professor LE DAUM.

First semester; Tu., Th., at 10:00.

Not given in 1906-1907.

26. *VOLTAIRE AND THE FRENCH REVOLUTION—Selected works. Prerequisite, courses 7 (8) and 23. Assistant Professor LE DAUM.

Second semester; Mon., Wed., Fri., at 11:00.

27. FRENCH CIVILIZATION—An examination of the ideas, life, institutions, society, ideals and influence of France. References: A. Rambaud; Fouillée; A. Franklin. The lectures, reviews, discussions, and addresses, are open to students in all departments of the University, and to the public. Assistant Professor LE DAUM.

First semester; Tu., at 3:30.

Not given in 1906-1907.

*A supplementary course (29) on Rousseau and education in France since Montaigne will be announced later. Assistant Professor LE DAUM.

D. SPANISH AND ITALIAN

For Graduates and Undergraduates.

It is recommended that students begin Spanish or Italian only after the first year or the first two years of French. It is inadvisable that Spanish 1 and Italian 1 be taken up at the same time.

SPANISH

1 (2). ELEMENTARY COURSE—I. Translation of prose selections from modern Spanish authors. II. Zagel-Schelling's Spanish grammar. III. Composition based on Ford's Materials. IV. Pronunciation and Conversation. Assistant Professor LE DAUM.

Throughout the year; Mon., Wed., Fri., at 9:00.

ITALIAN

1. FIRST YEAR COURSE—I. Reading of selected works from modern Italian novelists. II. Grandgent's Italian grammar, with exercises. Assistant Professors BUSH and LEDAUM.

First semester; Mon., Wed., Fri., at 9:00.

Not given in 1906-1907.

2. **ADVANCED COURSE—I.** Selections from Dante's works (Scartazzini edition) with lectures on his life and the times. **II.** Collateral reading. Assistant Professor BUSH.

Second semester; Mon., Wed., Fri., at 9:00.

Not given in 1906-1907.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON; ASSISTANT PROFESSORS STURM AND EASTMAN, MR. KOEHLER, AND MR. FERREISS

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that students will be able to read the literature with some degree of appreciation, and from this time on the ability to understand and to appreciate the great masterpieces of German literature is the main object in view; at the same time, however, the origin and history of words and the relation that the German language bears to the English tongue, are studied and explained. Sight translation, translating at hearing, writing from dictation, and conversation as means to a proper *Sprachgefühl*, form a part of the work.

Courses 1 (2), 3 (4), 5 (6), 7 (8), represent first year work, second year work, third year work, and fourth year work, respectively, and must be taken in the order of the numerals. Courses 9 to 26 are advanced courses, and may be taken in accordance with the regulations stated later.

All courses in German are offered every year except as otherwise indicated. Courses with odd numbers are given in the first semester, those with even numbers in the second semester. Students are invited to consult with the instructors in arranging their work. Graduate students of German will find it to their special advantage to combine with their work some of the courses offered in the Scandinavian and English departments.

The German library is particularly rich in history of German literature, the history of the German language, Goethe literature, Middle High German, Old High German, and possesses complete bound sets of the most important

philological periodicals. It is conveniently arranged in the German seminar room, No. 103 in the Hall of Liberal Arts, adjoining the other rooms of the department.

A. COURSE FOR UNDERGRADUATES

1 (2). GRAMMAR AND READING—*German Grammar*, with constant practice in writing German. The reading consists of easy plays and tales. These courses represent first year work. Seven sections. Assistant Professors STURM and EASTMAN; Mr. KOEHLER, and Mr. FERRISS.

Throughout the year; five times a week.

3 (4). LESSING, SCHILLER, GOETHE, AND FREYTAG—Selections from the works of the authors named, with composition. Courses 3 and 4 represent second year work. Four sections. Professor WILSON, and Assistant Professors STURM, and EASTMAN.

Throughout the year; Mon., Wed., Fri.

5. THE GERMAN NOVEL—Some such work as Scheffel's *Ekkehard*, or Freytag's *Soll und Haben*, is read and discussed as a piece of literary art. Course 5 represents third year work. Professor WILSON.

First semester; Mon., Wed., Fri., at 11:00.

6. GERMAN LYRICS—This course is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. There are lectures on German verse with special reference to the lyric poets. Buchheim's *Deutsche Lyrik*, or von Klenze's *Deutsche Gedichte*, is read by the class. Course 6 represents third year work. Professor WILSON.

Second semester; Mon., Wed., Fri., at 11:00.

7. FAUST—Goethe's *Faust*, *Parts I and II*. The main object of this course is to help the student to the enjoyment of *Faust* as poetry. Careful attention is given to its artistic character as a piece of literature possessing unity. Course 7 represents fourth year work. Professor WILSON.

First semester; Tu., Th., at 11:00.

8. HISTORY OF GERMAN LITERATURE—This course gives a general view of the development of German literature from the earliest times to the present, special attention being paid to the two classic periods of the twelfth and

eighteenth centuries. Francke's *History of German Literature as Determined by Social Forces*, or Robertson's *History of German Literature*, is used as guide, but this is supplemented by reports on assigned reading by the students and by lectures by the instructor. Course 8 represents fourth year work. A course in Heine's *Prose* may be substituted for course 8. Professor WILSON.

Second semester; Tu., Th., at 11:00.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

9. GERMAN SEMINAR—For the study and discussion of the works of special periods, of literary tendencies, or of other special subjects in the history of German literature. Each member of the Seminar undertakes, under the personal direction of the instructor, the examination of some special phase of the general subject, and makes regular reports upon the results obtained. As the subject varies from year to year, students may elect the course in succession without duplication. Professor WILSON.

First semester; Tu., Th., at 9:00.

10. GERMAN SEMINAR—A continuation of course 9. The work is conducted in the same manner, but a new subject may be taken up. Professor WILSON.

Second semester; Tu., Th., at 9:00.

11. MIDDLE HIGH GERMAN—Bachmann's *Mittelhochdeutsches Lesebuch*, and Paul's *Mittelhochdeutsche Grammatik*. Includes a rapid survey of Middle High German forms, a comparative study of Middle High German and New High German syntax. The reading of this semester is largely epic poetry. Professor WILSON.

First semester; Tu., Th., at 10:00.

12. MIDDLE HIGH GERMAN—Course 11 is a prerequisite. The reading consists of lyric and didactic poetry and of prose. The larger part of the time, however, is devoted to the lyrics of Walther von der Vogelweide. Professor WILSON.

Second semester; Tu., Th., at 10:00.

13. OLD HIGH GERMAN PROSE—Primarily for advanced and graduate students. Braune's *Althochdeutsches Lesebuch* and *Abriss der althochdeutschen Grammatik* are used.

Admission only on consultation with the instructor. Assistant Professor EASTMAN.

First semester; twice a week; time to be arranged.

Courses 13 and 14 alternate with courses 15 and 16, and were given in the year 1904-1905, and may be expected again in the year 1906-1907.

14. OLD HIGH GERMAN POETRY—Course 13 is a prerequisite. Assistant Professor EASTMAN.

Second semester; twice a week; time to be arranged.

15. OLD LOW GERMAN (Old Saxon)—Introduction to Old Saxon grammar with reading in the *Heliand* and the *Genesis* fragment. Holthausen's *Altsaechsisches Elementarbuch* and Behaghel's edition of the *Heliand* and the *Genesis*. Admission only on consultation with the instructor. Assistant Professor EASTMAN.

First semester; two hours a week.

Course 15 was given in the first semester of 1905-1906, and may be expected again in 1907-1908.

✓ 16. HISTORY OF THE GERMAN LANGUAGE—Primarily for advanced and graduate students. Prerequisite, one semester's work in any of the earlier periods of any of the Germanic languages. Admission only on consultation with the instructor. Assistant Professor EASTMAN.

Second semester; two hours a week.

Course 16 was given in the second semester of 1905-1906, and may be expected again in 1907-1908.

19. PHONETICS—The principles of sound-formation and sound-change, followed by a detailed study of the phonology of German. This part of the work is based upon Hempl's *German Orthography and Phonology*. Designed to furnish a foundation for work in philology and a practical preparation for those who intend to teach. Assistant Professor STUBB.

First semester; two hours a week; time to be arranged.

This course is offered in alternate years, and was given in the year 1904-1905, and may be expected again in 1906-1907.

20. GERMAN SYNTAX—The syntax of the New High German is studied from the historical and genetic point

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of view. The works of Erdmann, Behaghel, and Wunderlich are used. Assistant Professor STURM.

Second semester; two hours a week; time to be arranged.

The course is offered in alternate years, and was given in the year 1904-1905, and may be expected in 1906-1907.

21. GERMAN LIFE—A course of lectures in German on German life, institutions, and customs. Mr. KOEHLER.

First semester; Mon., at 1:30.

22. GERMAN LIFE—A continuation of course 21. Mr. KOEHLER.

Second semester; Mon., at 1:30.

23. DEUTSCHER AUFSATZ—This is a course in advanced German composition. Mr. KOEHLER.

First semester; twice a week.

24. DEUTSCHER AUFSATZ—A continuation of course 23. Mr. KOEHLER.

Second semester; twice a week.

25. NINETEENTH CENTURY GERMAN LITERATURE—For advanced students. Assistant Professor STURM.

First semester; twice a week.

26. NINETEENTH CENTURY GERMAN LITERATURE—A continuation of course 25. Assistant Professor STURM.

Second semester; twice a week.

SPECIAL CERTIFICATES IN GERMAN

Special certificates of scholarship in German are granted on or after graduation on conditions set forth elsewhere in this catalogue. The *minimum* amount of work required for admission to examination for such a certificate is represented by courses 1 to 6, and four courses chosen from 7 to 26.

SCANDINAVIAN LANGUAGES AND LITERATURE

PROFESSOR FLOM

In the department of Scandinavian the aim is to give equal attention to the literature and philology of the Northern languages. The courses will be given strictly as

outlined below. Course 1 is intended for those students who have no previous knowledge of Scandinavian. It is expected that this course will give the student such a thorough reading knowledge of modern Norse as shall enable him to read the works of Ibsen, Björnson and Lie. Courses are offered to suit the needs of students of Scandinavian parentage who have a fair knowledge of a Scandinavian language, but wish to pursue in class a more systematic study of the literature. For such students three courses are offered: 3 (4), 5 (6), 7 (8). The first of these will be preceded by a short course in Swedish grammar. Course 1 (2) is an elementary course and may precede more advanced work in Scandinavian languages or literature. Course 9 (10) is recommended especially to students in German and English philology. Such students who wish to take Scandinavian as a minor for a higher degree should combine course 9 (10) with 1 (2) or 3 (4) if registered for the M. A. degree. If the degree sought is the doctorate a third course such as 11 (12) should be taken the following year. To students in literature who wish to take Scandinavian literature as a minor for a higher degree 3 (4) and 7 (8) are recommended, although either may be combined with 1 (2). If Scandinavian is chosen as a major for a higher degree the amount and kind of work must be arranged in each case with the head of the department.

A. ELEMENTARY COURSE

1 (2.) NORSE—Principles of grammar, pronunciation, and the reading of easy prose will form the work of the first semester. Olson's *Norwegian Grammar and Reader* is used. This is followed by the study of Björnson's *Synnöve Solbakken* (ed. Flom) and Ibsen's *Et Dukkehjem* (*A Doll's House*), and Lie's *Den Fremsynte*.

Open to freshmen as an elective in the Bachelor of Arts course.

Mon., Tu., Th., Fri., at 2:30.

B. COURSES IN LITERATURE

3 (4). SWEDISH LITERATURE, with a brief introductory course in Swedish grammar in which Fort's *Grammar of*

Swedish is used. Study of the Gustavian period, 1772-1809, and the period of Tegner, 1809-1846; *Frithiofs Saga* as Tegner's chief work is carefully studied. Runeberg's *Fänrik Ståls Sägner* will be read in part. The class study is supplemented by a course of twelve lectures on the history of Swedish literature. In 1905-1906 when the course covered the XIXth Century, the class read Selma Lagerlöf's *I Dalarna*, Part I of *Jerusalem*.

Mon., Fri., at 3:30.

As the Swedish romantic movement stands in close relation to the romantic movement in Germany, course 17 in the German department might very well be taken in conjunction with the above course, or the first semester of the above course may serve as introductory to courses 17 (18) in German. See also course 49 in the English department.

5. DANISH LITERATURE—A course in Holberg is offered for 1906-1907.

First semester; Tu., Th., at 11:00.

7 (8). NORSE LITERATURE SINCE 1814—Lectures and class reading of masterpieces. First semester: Björnson's *Arne*, and *En Fallit*. Collateral reading: Kielland's *Skipper Worse*. Second semester: Ibsen's *Brand*, *Peer Gynt*, and *Samfundets Stötter*. Collateral: *Kongsemnerne*, and Boyeson's *A Commentary on the Writings of Henrik Ibsen*.

Twice a week; hours to be arranged.

In place of this course was given in 1905 a course in Ibsen's Social Dramas. The following were read and interpreted: *Samfundets Stötter*, *Et Dukkehjem*, and *En Folkefiende*. Some attention was given to Ibsen's dramatic method.

Not offered in 1906-1907.

16. HENRIK IBSEN—Class study of representative dramas in the order in which they were written. Archer's translation of Ibsen's *Prose Dramas* is used with Herford's translation of *Brand*. A knowledge of Norwegian is not required for this course.

Second semester; Tu., Th., at 11:00.

C. COURSES IN PHILOLOGY

9 (10). OLD NORSE—Elementary course. Lectures and

recitations. The aim of this course is to equip the student with a good vocabulary, and to acquaint him with the peculiarities of Old Norse phonology, inflection, and syntax, so as to enable him to read the old prose literature and to use the language for the purpose of comparative study within the Germanic group of languages. The course will begin with lectures on the relation of Old Norse to East and West Germanic. Phonological exercises in Old Norse, taken up comparatively, will form a part of the work. Holt-häusen's *Lehrbuch der Altisländischen Sprache (Elementarbuch and Lesebuch)* will be used, and Streitberg's *Urgermanische Grammatik* or Noreen's *Abriss der Urgermanischen Lautlehre*.

Throughout the year; Mon., Wed., at 10:00.

11 (12). OLD NORSE. THE ELDER EDDA — Advanced course. May be taken only by those who have had course 9 (10) or an equivalent. In the first semester the following mythological lays have usually been studied: *Þrymskviða*, *Hymiskviða*, *Alvissmol*, *Hárbarðsljóð*, *Lokasenna*, *Skirnismol*, *Grimnismol*, *Vafþrúdnismol*, *Baldur's Draumar*, *Volospo*, and *Hovamol*. In the second semester have been read the *Volundarkviða* and the heroic lays of the Volsunga cycle. The edition used is that of Detter and Heinzel, *Saemundar Edda*, Leipzig, 1903, together with Gering's *Vollständiges Wörterbuch zu den Liedern der Edda*.

Two hours a week; Tu., Th., at 3:30.

This course will be given again in 1907-1908.

22. NORSE MYTHOLOGY—Lectures. An outline of the religious belief of the Norsemen in pre-Christian times, with a study of the origin and transmission of the principal myths.

Twice a week; second semester.

14. HISTORY OF THE SCANDINAVIAN LANGUAGES—Lectures with occasional recitations. The course will deal especially with Dano Norwegian and Swedish. The relation of Old Northern to East and West Germanic; the basis for the division into East and West Scandinavian; later phonological changes in Norse, Danish and Swedish; the loss of grammatical forms resulting in the change of these languages from highly inflexional to analytic languages; the influences

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that have brought about the present gender categories in Danish and Swedish; change in gender of nouns; development in the meaning of words; the influence of English, German, and French, on the vocabulary; the Latin element; classification of the modern dialects. Prerequisite: Old Norse.

Twice a week; first semester.

Not given in 1906-1907.

17 (18). OLD SWEDISH—Lectures and exercises. This course will be given with lectures on the relation of East to West Scandinavian and on early dialectal differentiation in Old Danish. Noreen's *Altschwedische Grammatik* and *Altschwedisches Lesebuch*. Prerequisite; one Old Germanic dialect or a knowledge of Swedish in the modern period.

Throughout the year; two hours a week.

Not given in 1906-1907.

20. THE LINGUISTIC RELATIONS OF ENGLISH AND SCANDINAVIAN—Introductory lectures on early Norse and Danish settlements in England will be followed by a study of the characteristic of Old Northumbrian as differing from West Saxon. Methods of investigation, loan word tests, Scandinavian elements in Old and Middle English and Modern English dialects. The dialectal provenience of the loan-words. The spring quarter will be given to the study of English influence on Scandinavian, especially Old Norse, Modern Norse, and Danish. Prerequisite: a knowledge of Old Norse, and either Old or Middle English.

Second semester; two hours a week.

Not given in 1906-1907.

All the above courses are open to undergraduate and graduate students.

The following Norse, Swedish, Danish and Icelandic publications are accessible to students in the University or in private libraries: *Arkiv for Nordisk Filologi*, *Annaler* and *Aarbøger for nordisk Oldkyndighed og Historie* (1836-1904), *Arbok hins islenzka Fornleifafelags*, the publications of the *Samfund til Udgivelse af gammel nordisk Literatur*, *Islendinga Sögur*, *Dania*, *Nordisk Tidskrift* (Stockholm), *Språk och Stil*, *Studier i Modern Språkvetenskap*, *Nyt Historisk Tidsskrift* (Kristiana), *Danske Studier*, *Norvegia*, *Samtiden* and *Eimreiðin*.

ENGLISH

PROFESSOR ANSLEY; PROFESSOR FLOM, MR. BREWER, MR. PIPER, MR. SLOAN, MR. HUNT, MISS CHAWNER

Unless by special arrangement at the beginning, credit in any course is given only upon satisfactory completion of that course. This rule applies to courses which continue through the year as well as to semester courses.

Special certificates of scholarship in English are granted upon conditions explained under the heading "Teachers' Certificates." Information as to acceptable combinations of courses will be given upon request.

(1) COMPOSITION AND RHETORIC

1 (2). CONSTRUCTIVE RHETORIC—Practice in the construction of effective English prose, with observation of the principles involved. Required of all first year students in the College of Liberal Arts. Five divisions begin with the first semester and one division begins with the second semester. Mr. PIPER, Miss CHAWNER.

Throughout the year; two hours a week.

101 (102). RHETORIC—A course in the essentials of English composition with practice in their application. For first year students in the College of Applied Science. Mr. SLOAN.

Throughout the year; two hours a week.

121 (122). COMPOSITION—Practice in descriptive and expository writing. For second year students in the College of Applied Science. Mr. PIPER.

Throughout the year; one hour a week.

131 (132). COMPOSITION—Practice in descriptive and expository writing. For third year students in the College of Applied Science. Mr. PIPER.

Throughout the year; one hour a week.

141 (142). COMPOSITION—Practice in descriptive and expository writing. For fourth year students in the College of Applied Science. Mr. PIPER.

Throughout the year; one hour a week.

3 (4). THE ESSAY—Practice in expository writing and

in criticism of essays. Open to students who have completed course 1 (2). Mr. PIPER.

Throughout the year; two hours a week.

5 (6). ARGUMENTATION—A course in argumentative composition, based on Baker's "Principles of Argumentation." Open to students who have completed course 1. Mr. SLOAN.

Throughout the year; two hours a week.

7 (8). THE SHORT STORY—A course in narrative and descriptive prose and the art of modern prose fiction, the short story being the form selected for discussion and practice. Admission by consent of the instructor. Mr. HUNT.

Throughout the year; two hours a week.

Omitted in 1906-1907; offered in 1907-1908.

9 (10). POETICS—Studies in the forms of English verse. Mr. PIPER.

Throughout the year; two hours a week.

11 (12). COMPOSITION—Practice in writing English, for students who have completed course 3, 7, or 9. Assignments are adapted to individual needs, two conference periods weekly taking the place of class exercises. Registration, which is by consent of the instructor, may be for one hour or more of credit. Professor ANSLEY.

15. THE NEWSPAPER—Lectures upon some details in the work of newspaper making, with practice in writing for the press. What news is, and how it should be put in form for publication; the writing of editorials; the review of books and the drama; proof reading; the business department. Mr. BREWER.

First semester; two hours a week.

16. THE BOOK—The making and the care of books; manuscripts and early libraries; the invention of movable types; the work of the best printers, from Gutenberg to William Morris; modern methods in printing and publishing. Mr. BREWER.

Second semester; two hours a week.

(2) LITERATURE

21 (22). ENGLISH LITERATURE—Studies in English literature from Chaucer to Browning. The work of students

is commonly presented in writing, and attention is given to form as well as substance. Required of all second year students in the College of Liberal Arts. Five divisions. Mr. HUNT, Miss CHAWNER.

Throughout the year; three hours a week.

23. THE HISTORY OF ENGLISH LITERATURE—A survey of English literature from Chaucer to Shakespeare, with readings in representative verse and prose. The beginnings of English rhymed and blank verse. The development of the English drama. This course includes a study of *Hamlet*. Professor ANSLEY.

First semester; Mon., Tu., Wed., Th., at 9:00.

Offered in 1906-1907; omitted in 1907-1908.

24. THE HISTORY OF ENGLISH LITERATURE—A survey of English literature from Shakespeare to Pope, with readings in Milton, Dryden, and other writers in verse and in prose. The decline of the drama. Puritans and Cavaliers. The beginnings of periodical literature. The rise of classicism. Professor ANSLEY.

Second semester; Mon., Tu., Wed., Th., at 9:00.

Offered in 1906-1907; omitted in 1907-1908.

25. THE HISTORY OF ENGLISH LITERATURE—Pope to Wordsworth. The decline of classicism and the beginnings of the romantic movement. Professor ANSLEY.

First semester; Mon., Tu., Wed., Th., at 9:00.

Omitted in 1906-1907; offered in 1907-1908.

26. THE HISTORY OF ENGLISH LITERATURE—Wordsworth to Tennyson. Studies in Keats, Browning, Tennyson, Ruskin, Matthew Arnold, and other writers of the nineteenth century. Professor ANSLEY.

Second semester; Mon., Tu., Wed., Thu., at 9:00.

Omitted in 1906-1907; offered in 1907-1908.

31 (32). SHAKESPEARE—A study of ten plays of Shakespeare—histories, comedies, and tragedies. Mr. HUNT.

Throughout the year; two hours a week.

47. THE NOVEL—Studies in English novelists of the eighteenth century: Defoe, Richardson, Fielding, Smollett, and others. Mr. SLOAN.

First semester; two hours a week.

48. **THE NOVEL**—Studies in the English novelists of the nineteenth century: Scott, Dickens, Thackeray, George Eliot, and others. Mr. SLOAN.

Second semester; two hours a week.

61. **AMERICAN LITERATURE**—A survey of American literature from the colonial beginnings to the civil war. Irving, Cooper, Bryant, and Poe are studied, and the growth of sectional literatures is traced in lectures and readings. Miss CHAWNER.

First semester; three hours a week.

62. **AMERICAN LITERATURE**—The development of national American literature since the civil war. Studies in Whittier, Longfellow, Whitman, Lanier, and other poets, in the essays of Lowell, Holmes, and Stedman, and in representative novelists. Miss CHAWNER.

Second semester; three hours a week.

65 (66). **CRITICISM**—Studies in the theory of literary criticism. Seminary. Professor ANSLEY.

Throughout the year; Tu., Th., at 10:00.

67 (68). **THE TEACHING OF ENGLISH**—The English course in secondary schools, the subjects it includes, and ways of presenting them. Professor ANSLEY.

Throughout the year; Wed., Fri., at 10:00.

69 (70). **LITERARY LANDMARKS OF ENGLAND**—Occasional public lectures upon the Canterbury Pilgrimage, Ely Cathedral, Stratford-on-Avon, The Scott Country, The English Lakes, Westminster Abbey, and kindred subjects of interest to students of literature. All these lectures are fully illustrated by the stereopticon. Dr. GILCHRIST.

(3) PHILOLOGY

73. **HISTORICAL ENGLISH GRAMMAR**—Lectures and discussions. Studies in the history of modern English word-forms and construction. This course need not be preceded by courses in Old or Middle English. It is intended for students who expect to teach and for others interested in the language. Some of the topics that will receive consideration are: The rise of standard speech; the sources of the vocabulary; the genesis of the syntactical forms of modern English; the parts of speech; the development of

their use in modern English; the English of Shakespeare, etc. Dr. FLOM.

First semester; Tu., Th., at 10:00.

Offered in 1907-1908.

75 (76). MIDDLE ENGLISH—An introduction to Middle English. Emerson's *Middle English Reader* is used in the first semester. This will be followed by a study of Langland's *Piers the Plowman* and Chaucer's *Canterbury Tales*. Dr. FLOM.

Throughout the year; Tu., Th., at 9:00.

79 (80). OLD ENGLISH—An introduction to Old English with study of representative prose and poetry. Bright's *Anglo-Saxon Reader* and Cook-Siever's *Grammar of Old English* are used. In connection with the prose selections read some attention is given to historical English syntax. Dr. FLOM.

Throughout the year; Mon., Wed., Fri., at 9:00.

81 (82). ADVANCED OLD ENGLISH—In this course *Beowulf* is read and the chief problems in *Beowulf* criticism are considered; the growth of the epic and its present form; its historical and mythical elements; its original home, etc. Dr. FLOM.

Throughout the year; two hours a week.

87 (88). GOTHIC—An introduction to the Gothic language. This is a course in the study of Gothic phonology, morphology, and syntax, with constant reference to other Germanic dialects. The following books are used: Wright, *A Primer of the Gothic Language*, second edition, Oxford, 1900, or Streitberg, *Gotisches Elementarbuch*, Heidelberg, 1897; Stamm-Wrede, *Ulfilas*, 10 Aufl., Paderborn, 1903; Uhlenbeck, *Etymologisches Wörterbuch der gotischen Sprache*, 2 Aufl., Amsterdam, 1900; Streitberg, *Urgermanische Grammatik*, Heidelberg, 1900. Open to students who have a knowledge of Old English or of any other early Germanic dialect. Dr. FLOM.

Throughout the year; two hours a week.

PUBLIC SPEAKING

PROFESSOR GORDON; MISS EVAETS

The courses in this subject naturally divide them-

selves into two lines of work; one line looking to debate or oratory as an end, and the other to the interpretation of literature as an end. Courses 1 (2), 3 (4), 18, and 20 are fundamental to both lines of work. No student who has not taken or is not taking one of these courses or its equivalent will be admitted to advanced courses 11 (12) and 13 (14). All other courses are open to students who have had no previous training in public speaking. Students making a special study of debate are advised to take a fundamental course and courses 7 (8), and 18. Students making a special study of oratory are advised to take a fundamental course and courses 5 (6), 9, and 18. Courses 1 (2), 3 (4), and 20 are designed for students who wish to study the vocal interpretation of literature. Course 15 (16) is designed for students desiring to pursue special lines of study upon approved topics in debate and oratory. Under certain conditions, freshmen may obtain this work and are advised to consult the instructors before registering.

A. ELEMENTARY COURSE

1. PUBLIC SPEAKING AS AN ART—This course is general, seeking to prepare the student for the special forms of public speaking. Each student is examined with reference to his individual needs and an effort is made to adapt the work to such needs. Miss EVERTS.

First semester; four hours a week.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

3 (4). LITERARY INTERPRETATION—The lyric, epic, dramatic, and oratoric forms are studied in their relation to public speaking.

Throughout the year; two hours a week.

5 (6). PUBLIC ADDRESS—The preparation and presentation of an argument as to preliminary reading, structure, evidence, briefing, style, and delivery are carefully developed. The forms of oratory are studied, and one or more illustrated by the work of the student. Professor GORDON.

Throughout the year; three hours a week.

Not given in 1906-1907.

7 (8). DEBATE—This course seeks to develop the

handling of refutation in the preparation of briefs and forensics and actual debate. Professor GORDON.

Throughout the year; two hours a week.

[Courses 5 (6), 7 (8), are the same in content during the first semester. Those students who have taken either course alone can schedule for the latter half of the other in the second semester.]

9. ORATORY—Takes up the problems of the audience, the style and atmosphere of the address, and the function of persuasion in speaking. Students wishing to enter for the Northern Oratorical League contest or the Hamilton Club Prize Oration contest can prepare their orations in connection with the work in this course. Professor GORDON.

First semester; two hours a week.

NOTE: This course is recommended to students who are taking Greek, 5 (6).

11. (12). INTERPRETATION OF THE DRAMA—This course takes up the value of imagination and dramatic instinct in the interpretation of the drama and seeks to develop the same by a study of the play. Miss EVERTS.

Throughout the year; two hours a week.

13 (14). SHAKESPEARE—A play is studied from the standpoint of its presentation with practical work by the student. Miss EVERTS.

Throughout the year; two hours a week.

15 (16). DEBATE AND ORATORY—This course is designed for students desiring special work on the preliminary and inter-collegiate debates and the preliminary and oratorical contests for the Northern Oratorical League and Hamilton Club prize oration contest. Students may schedule for this course at the opening of the first or second semester. Professor GORDON.

First or second semester; two hours a week.

18. EXTEMPORE SPEAKING—Practical work is offered in this course looking to the development of the forms of discourse in actual speaking. Professor GORDON.

Second semester; two hours a week.

20. VOCAL EXPRESSION—Practical work in literary interpretation is offered in this course. It is open only to women. Miss EVERTS.

Second semester; two hours a week.

21 (22). BROWNING—In this course a study is made of the monologues of Robert Browning. Miss EVERTS.

Throughout the year; two hours a week.

Not given in 1906-1907.

C. COURSES PRIMARILY FOR GRADUATES

101 (102) HISTORY OF ORATORY—A course designed for special research work by graduate students. Professor GORDON.

INTER-COLLEGIATE ORATORY AND DEBATE

The Northern Oratorical League and the Hamilton Club of Chicago offer each year a first prize of one hundred dollars and a second of fifty. The former is endowed by Mr. Frank O. Lowden, an alumnus of the University. Iowa is entitled to one representative in each contest. Preliminary contests are held to determine who these persons shall be. Five weeks before the close of the first semester the preliminary for the Northern Oratorical League takes place. The preliminary for the Hamilton Club contest comes upon the last Friday in May. The orations for the latter contest must be handed in by the first Saturday in May. Four of the winners of the home Northern Oratorical contests, Messrs. Otto Brackett, E. K. Brown, E. J. Shannahan and H. G. Walker have established a twenty-dollar gold prize in oratory open to freshmen in all colleges. The orations for this contest must be handed in by the last Saturday in March. A similar prize, the gift of Mr. George W. Egan, an alumnus of the University, is offered to sophomores of all colleges. The orations for this contest must be handed in by the last Saturday in February.

The opportunities in debate are equally great with those in oratory. The debating leagues have permanent debates with the universities of Minnesota, Notre Dame, Kansas, and South Dakota. A prize of fifty dollars, the gift of Mr. Frank O. Lowden, is offered for the best work in public debate during the course of the year.

HISTORY**PROFESSOR WILCOX; PROFESSOR PLUM****A. ELEMENTARY COURSES**

1. **HISTORY OF GREECE**—Text-book, lectures and assignments. A general course in Greek history, intended for first-year students. Special attention is paid to training in methods of historical study. After the holiday recess, the history of Rome will be taken up as preliminary to course 2.

2. **Professor PLUM.**

First semester; four hours a week.

Course 1 will also be offered during the second semester.

2. **HISTORY OF ROME**—Text-book, lectures, and assignments. An outline of political and constitutional history down to the crowning of Charles the Great; a study of the growth and organization of the republic, the development and decline of the Roman empire, and its transformation into the empire of the Germans. A continuation of course 1.

1. **Professor PLUM.**

Second semester; four hours a week.

3. **HISTORY OF FRANCE**—Text-book and lectures. This course is an outline history of France to 1789. It consists of a study of the monarchical institutions of France, the relation of France to the papal system and to the growth of general European civilization. The course is primarily designed for sophomores. **Professor PLUM.**

First semester; two hours a week.

4. **HISTORY OF GERMANY**—Text-book and lectures. The topics under discussion in this course are the organization of the German kingdom and the Holy Roman Empire, the struggle with the Church, the relation to the Protestant Revolution and the development under the House of Hapsburg. This course also is designed for sophomores. **Professor PLUM.**

Second semester; two hours a week.

5. **THE HISTORY OF EARLY AND MEDIAEVAL ENGLAND**—This course consists of topical analyses, special assignments, and lectures. It is an outline study of English his-

tory from the beginning of English national life to the close of the War of the Roses. The central theme is the development of English political institutions. The social, economic, literary, and religious life of the people is studied in its relation to the political development of England. Professor PLUM.

First semester; three hours a week.

6. THE HISTORY OF ENGLAND UNDER THE TUDORS AND STUARTS—Topical analyses and lectures. This course covers the history of England from the end of the fifteenth century to the opening of the eighteenth. Special attention is given to the outworking of those complex forces of national life which have made England the foremost body politic in the modern states-system of Europe. Professor PLUM.

Second semester; three hours a week.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

7. THE RENAISSANCE AND THE PROTESTANT REVOLUTION—This course includes a summary of the Renaissance movement and an analysis of the factors of the Protestant Revolution. Course 4 is recommended as a preliminary to this course. Professor PLUM.

First semester; two hours a week.

8. FREDERICK THE GREAT AND THE MAKING OF MODERN GERMANY—The history of Prussia will be followed from 1740 to 1870 as the center about which will be grouped the principal facts in the organization of the German Empire. Professor PLUM.

Second semester; two hours a week.

9. THE HISTORY OF THE UNITED STATES—This course is a series of lectures to advanced students. The lectures aim to present the various steps which led to the establishment of the Constitution of the United States in 1789. The struggle between the states of Europe for domination in America, the reasons for the English victory, the growth of the movement for independence and the working out of the problem of union, constitute the subject matter under consideration. Professor WILCOX.

First semester; three hours a week.

10. THE HISTORY OF THE UNITED STATES—This course

consists of lectures on the development of national political life under the Constitution from its establishment in 1789 to the compromise of 1850. Professor WILCOX.

11. **THE EASTERN QUESTION**—This course is in part a study in the contemporary politics of Europe and the eastern world. The history of the eastern question, the eastern question in Europe, in Asia, and in Africa, the relations of the six great powers to the eastern question, and the possible solutions of the eastern question, are the general lines along which the lectures are developed. Professor WILCOX.

First semester; two hours a week.

12. **ENGLAND UNDER THE HOUSE OF HANOVER**—This is a lecture course covering the last two centuries of English history. The course is open to those students who have already had courses 5 and 6 or their equivalents. Professor WILCOX.

Second semester; two hours a week.

13. **THE FRENCH REVOLUTION**—This is a lecture course covering the period of European history from 1789 to 1799. An attempt is made to consider the movement both as a political episode in France and also as an epoch in the general history of Europe. Professor WILCOX.

First semester; two hours a week.

14. **SECESSION AND RECONSTRUCTION**—This is a lecture course in United States history from the compromise of 1850 to the conclusion of the work of reconstruction. Professor WILCOX.

Second semester; two hours a week.

C. COURSE OPEN TO GRADUATES ONLY

15 (16). **SEMINAR IN UNITED STATES HISTORY**—This work is intended for those graduate students who wish to emphasize American history. The work consists of special individual research on selected topics in American history. The aim is to acquire a more intimate acquaintance with the body of knowledge comprised in American history, to develop methods of independent research, and to become thoroughly acquainted with library sources. The results

of the investigation are presented in reports to the seminar.

Professor WILCOX.

Throughout the year; two hours a week.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH; DR. HORACK

Freshmen are advised to schedule for course 3, which is announced under the title of "Actual American Government." Students who desire to elect but one year's work in this department are advised to schedule for courses 1 and 2. Those who expect to pursue a more extended line of study in political and social science are advised to schedule for these courses in their second or sophomore year.

Courses 7, 8, and 11 constitute a liberal introduction to the study of law, and are arranged for the combined liberal arts and law course.

UNDERGRADUATE COURSES

1. AN INTRODUCTION TO POLITICAL SCIENCE—In the study of political and social science, this course is fundamental, being a general introduction to the phenomena of organized society among men. The scope of the lectures may be briefly indicated as follows:—The early history of mankind, wherein evolution and the fundamental laws of human progress will be explained and their application to the development of social and political institutions clearly indicated; a general consideration of anthropology with reference to its bearings upon the study of the political and social institutions of the Indo-European peoples; the origin of government historically considered; the political institutions of the ancient Greeks, and a consideration of their political ideas and ideals; the political institutions of the Romans, and a consideration of their contributions to public law and jurisprudence; primitive Germanic institutions, especially the markgenossenschaft; and mediæval politics—feudalism and the Church and State. Professor SHAMBAUGH.

First semester; Mon., Wed., Fri., at 8:00.

Open to all students except freshmen.

2. **MODERN GOVERNMENTS**—Lectures on the governments of France, Germany, Prussia, Switzerland, Belgium, Australia, and England. Professor SHAMBAUGH.

Second semester; Mon., Wed., Fri., at 8:00.

Open to all students except freshmen.

3. **ACTUAL AMERICAN GOVERNMENT**—This course, being designed especially for freshmen, aims to take up the subject of government in the United States where the courses in civics in the high schools leave off. Herein American Government will be treated not only as to form and organization, but especially from the viewpoint of (1) fundamental principles, (2) the actual workings and operations of local, state, and national administration, and (3) the relation of the citizen to public affairs. Open to freshmen.

First semester; Mon., Tu., Wed., Th., at 9:00.

4. **COMPARATIVE STATE LEGISLATION**—A study of present problems. Herein particular attention will be given to the growth of trusts and corporations showing the diversity of provisions for their organization and control, as well as the causes tending toward greater uniformity of law embodied in federal legislation. State and federal statutes and decisions will be studied and compared. The course will be non-technical. Dr. HORACK.

Second semester; Mon., Wed., Fri., at 11:00.

Open to juniors and seniors.

5. **POLITICAL PARTIES**—This course will be divided into two parts; part one will be devoted to the study of the history of political parties since the adoption of the constitution and will include a consideration of the issues upon which parties are founded. The second part will be devoted to the study of the political machinery of parties—caucuses, nominating conventions, committees, etc.—and to an examination of campaign literature—including platforms, political circulars, speeches, cartoons, etc. Open to juniors and seniors. Dr. HORACK.

First semester; Tu., Th., at 9:00.

6. **MUNICIPAL GOVERNMENT**—A study of the organization and administration of city governments. The problems of modern city life. The sphere and functions of mu-

municipal governments. Their relation to quasi-public works. Open to juniors and seniors. Dr. HORACK.

Second semester; Tu., Th., at 9:00.

7. JURISPRUDENCE—A study of nature, definition, classification, and divisions of law. This course will include lectures on the history and fundamental principles of the civil law of Rome and the common law of England. The discussions will be largely non-technical. Recommended in the combined college of liberal arts and law course. Open to juniors and seniors. Professor SHAMBAUGH.

First semester; Mon., Wed., Fri., at 10:00.

8. CONSTITUTIONAL LAW—An introductory study of the nature, principles, and powers of government in the United States as reflected in written constitutions and in judicial interpretations. Leading cases in constitutional law will be read and discussed. Recommended in the combined college of liberal arts and law course. Open to juniors and seniors. Professor SHAMBAUGH.

Second semester; Mon., Wed., Fri., at 10:00.

9. AMERICAN POLITICAL THEORY—A study of American political ideas and ideals, wherein leading state papers will be analyzed, and the political theories of such representative American thinkers as William Penn, Thomas Paine, Washington, Hamilton, Jefferson, John Adams, Samuel Adams, Madison, Fisher Ames, Marshall, Monroe, Webster, Calhoun, Clay, Alexander Stephens, and Lincoln will be discussed and criticised. Open to juniors and seniors. Professor SHAMBAUGH.

First semester; Tu., Th., at 11:00.

10. AMERICAN POLITICAL THEORY—This will be a continuation of course 7. Open to juniors and seniors. Professor SHAMBAUGH.

Second semester; Tu., Th., at 11:00.

11. INTERNATIONAL LAW—A study of the nature, sources, and sanctions of International Law. The causes determining the development of international relations will be considered with special emphasis upon the modern application of the rules of International Law. The Law of Peace, the Law of War, and the Law of Neutrality will be presented through reference to cases, lectures, assigned

readings, and reports. Recommended in the combined liberal arts and law course. Open to juniors and seniors. Dr. HORACK.

First semester; Tu., Th., at 10:00.

12. **POLITICAL SCIENCE CONFERENCE**—A weekly conference for the discussion of contemporaneous political problems, current legislation, and current political literature. Professor SHAMBAUGH, and Dr. HORACK.

Second semester; Tu., 2:30 to 4:30.

13. **IOWA HISTORY AND POLITICS**—A course of lectures on the history and politics of Iowa. Professor SHAMBAUGH.

First semester; Tu., Th., at 1:30.

14. **GOVERNMENT OF COLONIES AND DEPENDENCIES**—A study of the history and principles of the various systems of colonial government and administration, with special reference to American territories and dependencies, the phenomenon of "expansion," the causes of migration, the diversity in race characteristics, and the conditions necessary for local self-government. Open to juniors and seniors. Dr. HORACK.

Second semester; Tu., Th., at 8:00.

COURSES PRIMARILY FOR GRADUATES

15. **COMPARATIVE NATIONAL GOVERNMENTS**—A comparison of the provisions of the constitutions of England, United States, France, Germany and Switzerland, from both a theoretical and a practical standpoint. Dr. HORACK.

First semester; two hours a week.

16. **THEORIES OF SOVEREIGNTY**—A general survey of political theories as to the origin, nature, and limitations of governmental authority in relation to the individual. It is the purpose of this course to show historically the development of ideas concerning the functions and powers of government. Dr. HORACK.

Second semester; two hours a week.

17. **POLITICAL THEORY**—In this course a system of pure political theory will be outlined and correlated with philosophy. Professor SHAMBAUGH.

First and second semesters; two hours a week.

18. **ADMINISTRATIVE LAW**—A comparative study of administrative law in France, Germany, England, and the United States. Professor SHAMBAUGH.

Second semester; two hours a week.

19. **SEMINARY IN POLITICAL SCIENCE**—In 1906-1907 selected subjects will be assigned for critical study and discussion. Professor SHAMBAUGH, and Dr. HORACK.

Throughout the year; two hours a week.

POLITICAL ECONOMY AND SOCIOLOGY

PROFESSOR LOOS; PROFESSOR PATTERSON, DR. WARD, MR. HANEY, MR. WASSAM.

Students who look forward to special courses of study in the School of Political and Social Science are advised to elect the introductory course in economic theory and the course in economic history (political economy 1 and 2, or 5 and 6) in their sophomore year.

Courses 1 and 2, or 5 and 6, constitute the preferred general introductory course for all courses in this department except that course 4 may be taken independently; certain other courses, 7 to 14, 19 (20), 23 (24), may be taken at the same time with courses 1 and 2 or 5 and 6 but not independently as initial courses in economics. For the courses 15 (16) and 25 (26), in sociology, open only to juniors, seniors and graduates, no specific previous course is required. On programmes any of the courses of this department may be cited as economics followed by the appropriate number; or 15 to 26 as sociology, and 9 to 12, and 29 to 38, as commerce.

A. ELEMENTARY COURSES

1. **INDUSTRIAL HISTORY**—After an introductory study of primitive man and primitive civilization the course will occupy itself mainly with the development of commerce and industry in England. Mr. WASSAM.

First semester; Mon., Wed., Fri., at 11:00 and at 1:30.

2. **INTRODUCTION TO ECONOMICS**—An introduction to the leading principles of economic science. Primarily for

sophomores; open also to more advanced students. Mr. WASSAM.

Second semester; Mon., Wed., Fri., at 11:00.

2b. ECONOMICS—A special course in general economics prescribed for seniors in mechanical, civil and electrical engineering. Professor Loos and Mr. WASSAM.

Second semester; second half, daily at 8:00.

4. INDUSTRIAL HISTORY OF THE UNITED STATES AND THE RAW MATERIALS OF COMMERCE—The time will be divided equally between the two subjects. Prescribed for freshmen in the course in commerce. Professor PATTERSON and Mr. WASSAM.

Second semester; Mon., Wed., Fri., at 9:00, and 4th hour thesis work.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. PRINCIPLES OF ECONOMICS—Fundamental economic concepts; the organization of industry; the distribution of wealth; the relation of the state to industrial action. Designed as a general survey of economic science for advanced students; open to juniors, seniors, and professional students with or without a previous course in economics. Professor Loos.

First semester; Mon., Wed., Fri., at 9:00.

6. ECONOMIC HISTORY—Outlines of economic history, with some notice of the history of economic theory, a study more especially of recent economic history with detailed analysis of the industrial revolution in its economic and social aspects. Special attention will be given to the development of the individualistic philosophy and to the later development of the organic conception of society, and its reaction on practical politics and legislation—the factory acts, trade-unionism and the trust problem. Designed to follow course 5 or 2, but it may be taken independently. Professor Loos.

Second semester; Mon., Wed., Fri., at 9:00.

7. CURRENCY AND BANKING—Money and credit instruments with outlines of the monetary history of the United States; the principles of banking and credit financiering. Professor Loos.

First semester; Mon., Wed., Fri., at 11:00.

8. **PUBLIC FINANCE**—The science of public finance; the theory of public expenditure; public income and public debts; the preparation of the budget and financial administration. Professor LOOS.

Second semester; Mon., Wed., Fri., at 11:00.

9 (10). **RESOURCES OF NATIONS**—Prescribed for sophomores in the commerce course. The position of the United States in reference to other nations will be considered, followed by a critical study of the resources of the several states. Federal reports will be freely used, and the various year books and trade journals consulted. Students will be required to consult these sources and determine for themselves the relative weight of the several industries in different countries. Professor PATTERSON.

Throughout the year; Tu., Th., at 11:00.

11. **CORPORATION FINANCE AND THE THEORY OF ACCOUNTING**—Corporation management and finance. Growth of corporations; their organizations; forms of investment; stock speculation; consolidation; bankruptcy; receivership, reorganization; general principles of investment. The principles and methods of accounting. Professor PATTERSON.

First semester; Mon., Wed., Fri., at 2:30.

12. **TRANSPORTATION**—The course will deal chiefly with railways; railroad organization and management, explanation of terms in common use in railroad accounts and reports, history of railroad development, discussion of rates, competition, discrimination, state management, and the commission system—state and interstate. Professor PATTERSON.

Second semester; Mon., Wed., Fri., at 2:30.

13. **THEORY AND TECHNIQUE OF STATISTICS**—A study of the population of the United States will be used to illustrate the statistical methods of investigation. Professor PATTERSON.

First semester; Tu., Th., at 2:30.

14. **PROBLEMS IN STATISTICS**—Laboratory course. The preparation of schedules, methods of tabulation, tabular and diagrammatic presentation of facts; the use of aver-

ages, index numbers, the median, the coefficient of error and other statistical devices. Professor PATTERSON.

Second semester; Tu., Th., at 2:30.

15. **SOCIAL AMELIORATION**—State agencies for the care of delinquents and defectives, population elements; growth of municipal enterprises—public utilities and educational agencies; growth of philanthropic spirit—voluntary agencies for aid of needy classes. Professor PATTERSON.

First semester; Tu., Th., at 10:00 and third hour optional.

16. **INTRODUCTION TO SOCIOLOGY**—The relation of sociology to the other social sciences; the physical and psychical aspects of association; social forces; social genesis; social values and social welfare. Professor LOOS.

Second semester; Tu. and Th., at 10:00 and third hour optional.

18. **CRIME AND CHARITIES**—Criminology and penology; pauperism and methods of relief; philanthropic financing; social settlements. Course 15 must precede this course. Dr. ———.

Second semester; two hours, time to be arranged.

19 (20). **THE LABOR PROBLEM**—The labor problem in relation to the evolution of industry. The economic condition of the working classes in Europe and the United States from the beginning of the eighteenth century to the present time. The rise and growth of labor organizations; the development of collective bargaining; industrial arbitration and conciliation. Influence of the philosophy of individualism on legislation. The principle of state interference in industry. Mr. WASSAM.

The work of each semester may be taken separately.

Throughout the year; Tu., Th., at 11:00.

21 (22). **SOCIAL ANTHROPOLOGY AND ETHNOLOGY**—The primary ethnical groups. Man and his works in prehistoric times; an ethnological study of industrial and social organization from the earliest beginnings; regulation of industry; primitive methods of social control. Culture stages and descriptions of the institutions of the less advanced contemporary races. Dr. WARD.

Throughout the year; Tu., Th., at 11:00.

NOTE. The attention of students in sociology is called

to the courses in archeology offered by Professor Fairbanks. See announcement under GREEK.

23 (24). **SOCIAL ECONOMICS**—Selected topics in economics and sociology. Conducted as a seminar. Mr. WASAM.

The work of each semester may be taken separately.

Throughout the year; two hours, time to be arranged.

25. **SOCIAL AND POLITICAL PHILOSOPHY**—The class will read Plato's *Republic and Laws*, Aristotle's *Politics*, Machiavelli's *Prince*, and selections from Hobbes, Montesquieu, Blackstone, and Locke; Spencer's *Man vs. the State*, Huxley's *Administrative Nihilism*, Ritchie's *Principles of State Interference*, and selections from other modern philosophers. Professor LOOS.

Given in 1905-1906; omitted in 1906-1907.

First semester; Tu., Th., at 11:00.

26. **SOCIALISM AND CONTEMPORARY SOCIAL LEGISLATION**—Continuation of course 25 with special reference to contemporary socialism and current tendencies in legislation. Professor LOOS.

Second semester; Tu., Th., at 11:00.

Given in 1905-1906; omitted in 1906-1907.

29 (30). **COMMERCIAL POLICIES**—This course will include a brief review of the commercial systems adopted at various times by the several nations and a careful study of present policies. Protection, free trade, the mercantile system, reciprocity and commercial treaties, bounties, subsidies, tonnage duties, navigation laws, and the consular service will be among the topics treated. Professor PATTERSON.

Throughout the year; daily, time to be arranged.

31. **TAXATION**—An intensive study of the principles, methods and systems of taxation with special reference to the incidence and effects of the several taxes. Course 8 must precede this course. Professor PATTERSON.

First semester; two hours, time to be arranged.

32. **INSURANCE**—The theory, history and organization of insurance. Professor PATTERSON.

Second semester; two hours, time to be arranged.

33. **INTERNATIONAL LAW AND COMMERCE**—The mean-

ing of international law and its development with special reference to commerce; the laws of peace—independence, property, methods of territorial acquisition, jurisdiction, equality and diplomacy; the laws of war and the principles of neutrality—neutral commerce; arbitration and the Hague tribunal. To be given in 1906-1907 as part of course 29. Professor Loos.

34. THE CONSULAR SERVICE—A study of the consular service of the United States and other leading countries. Conducted as a seminary. To be given as part of course 30. Professor PATTERSON.

35 (36). THE MATERIALS OF COMMERCE—Courses in the materials of commerce are at present provided by the departments of botany and geology, supplementing courses 4 and 9 (10) in this department.

37 (38). COMMERCIAL LAW—Students during their senior year may schedule in the College of Law for contracts, bills, and notes, and similar courses, under the advice of this department, but in no case for more than five hours in one semester.

C. COURSES PRIMARILY FOR GRADUATES

39 (40). ADVANCED ECONOMIC THEORY—The rise and development of the classical school of economists will first be considered. This will be followed by a study of the recent development of political economy. The class will read (1) portions of Adam Smith's *Wealth of Nations*, Malthus's *Essays on Population*, Ricardo's *Political Economy*, and Cairnes's *Leading Principles*; and (2) selections from the writings of the Austrians and from Marshall, Clark, and other modern economists. Professor Loos.

Throughout the year; two hours, Wed., at 2:30, and two hours thesis work optional by appointment.

45 (46). PROBLEMS IN STATISTICS—Designed to assist advanced students in specific lines of statistical research. Professor PATTERSON.

Throughout the year; hours to be arranged.

47 (48). GRADUATE SEMINARY—Conducted jointly with the departments of history and political science. Prelim-

inary investigations and reports and prepared papers will be presented at joint sessions of the sections on alternate Monday evenings. Professors LOOS and PATTERSON.

PHILOSOPHY

PROFESSOR SEASHORE; PROFESSOR ———, PROFESSOR FAIRBANKS, MR. STAROB.

A. ELEMENTARY COURSES

1 (2). **ELEMENTARY PSYCHOLOGY**—A general course designed as an outline study of the whole subject, an introduction to the special courses in psychology, and a foundation for courses in all other departments which deal primarily with the phenomena of mental life. The lectures will be illustrated with a rich collection of material for demonstration and by experiments before the class. Selections from the standard text-books will be read. Open to sophomores. Professor SEASHORE.

Throughout the year, two sections; three hours a week.

3. **LOGIC**—The methods of induction and deduction. Exercise in the detection of fallacies and the expression of arguments. Open to sophomores. Professor ———.

First semester; two hours a week.

4. **ETHICS**—An introduction to theories of morals and their practical application. The prominent problems of individual and social ethics. Professor ———.

Second semester; two hours a week.

5 (6). **HISTORY OF PHILOSOPHY**—This course will serve as a general introduction to philosophical problems as well as to the history of thought. Attention will be given to the definition of terms and explanation of the meaning of the various philosophical problems. The first semester will be devoted to Greek philosophy, and early Christian and mediæval thought; the second semester, to modern philosophy.

This course should be taken as preliminary to all ad-

* The vacancy in the chair of philosophy will be filled before the opening of the year 1906-1907.

vanced courses in philosophy, and, where possible, should be preceded by the elementary courses in psychology, logic, and ethics. Professor ———.

Throughout the year; three hours a week.

7 (8). **LABORATORY COURSE IN EXPERIMENTAL PSYCHOLOGY**—The exercises are so selected and arranged as to familiarize the student with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem; during the first period the experiment is performed by each individual, the class being divided into groups of two, and during the second, the results and the literature on the subject are discussed on the seminary plan. Professor SEASHORE, and Mr. STAROH.

Throughout the year; two hours a week.

This course may be taken with or in sequence to course 1 (2).

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

9. **PSYCHOLOGICAL INTERPRETATIONS**—A general survey of the laws of abnormal mental phenomena, and normal mental phenomena which demand special explanation. Abnormal perception, memory, imagination, reasoning, will, and feeling will be discussed with reference to the explanation of sleep, hypnosis, illusions, automatism, alterations of personality, insanity, degeneracy, and crime. Lectures and reading. Professor ———.

First semester; two hours a week.

10. **GENETIC AND COMPARATIVE PSYCHOLOGY**—A study of the evolution of mind in the animal series and the development of mind in the individual. The course includes a discussion of the beginning and function of consciousness, the origin and evolution of instincts, the relation of heredity and training, the development of intellect, and the characteristics of infancy, childhood and adolescence. Lectures and reading. Professor ———.

Second semester; two hours a week.

11. **THE RELATION OF MIND AND BODY**—A discussion of the various answers to this problem, first from the empirical and then from the philosophical point of view. Strong's

Why the Mind Has a Body will be studied critically. Professor ———.

First semester; two hours a week.

12. **ÆSTHETICS**—Brief preliminary survey of æsthetic theories from the Greeks to the present. Analysis and criticism of the principles of art from the standpoint of psychology. Reconstructive study of æsthetics, including the sense of beauty and the art impulse. The course will be based on Santayana's *Sense of Beauty* and Hirn's *Origins of Art*. Professor ———.

Second semester; two hours a week.

C. COURSES PRIMARILY FOR GRADUATES

13. **GERMAN PHILOSOPHY OF THE NINETEENTH CENTURY**—This course will include: (1) A review of the three great movements of thought in Germany in the past century, the idealistic, the materialistic, and the pessimistic, and (2) a study of recent German philosophy and present tendencies. Prerequisite, course 5 or its equivalent. Professor ———.

First semester; two hours a week.

14. **ENGLISH AND AMERICAN PHILOSOPHY OF THE NINETEENTH CENTURY**—A study of recent English and American philosophy, with special reference to the problems of (1) mechanism and teleology, (2) the relation of the physical and the psychical, and (3) pluralism and monism. Prerequisite, course 5 (6) or its equivalent. Professor ———.

Second semester; two hours a week.

19. **THEORY OF KNOWLEDGE**—An inquiry into the origin, nature, validity and value of knowledge. Professor ———.

First semester; two hours a week.

20. **SCIENTIFIC CONCEPTS**—A discussion of the meaning and implication of such conceptions as evolution, variation, mutation, causation, law, measurement and chance. It inquires into the presuppositions and value of some of the fundamental ideas of mathematics, physics, biology and psychology. Professor ———.

Second semester; two hours a week.

21 (22). **PROBLEMS IN PSYCHOLOGY**—A course of reading and criticism in the current literature of psychology. Professor SEASHORE.

Throughout the year; individual work.

23 (24). **RESEARCH IN PSYCHOLOGY**—Original investigation of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *State University of Iowa Studies in Psychology*. Professor SEASHORE.

Throughout the year; individual work.

25. **HISTORY OF PSYCHOLOGY**—A general survey of the development of psychology in ancient, mediæval, and modern thought. Aristotle, St. Augustine, Kant, and Wundt, will be studied intensively as representatives of distinct periods. Mr. STAROB.

First semester; two hours a week.

27 (28). **PROBLEMS IN PHILOSOPHY**—Special individual research in some historical or critical problem of philosophy. Professor ———.

Throughout the year.

29 (30). **COMPARATIVE RELIGION**—Roman Religion. See Latin 40 (41). Professor FAIRBANKS.

Throughout the year; one hour a week.

This course will be followed by a course on Greek religion.

31 (32). **STUDIES IN GREEK PHILOSOPHY**—The work of the course centers about the problems discussed by Plato in the Republic. The development of these problems before Plato, the significance of Plato's own treatment of them, and the influence of the Platonic system on later Greek thought will be discussed in lectures by the instructor and in papers by the students. Professor FAIRBANKS.

Throughout the year; two hours a week.

See Greek 19 (20).

SPECIAL PRACTICAL ETHICS—The ethics of science, literature, art, religion, the home, politics, business, the professions, social organizations, special student activities, academic proprieties, recreation, athletics, health, and mental economy will be considered in a course of lectures. The course is given by the cooperation of several departments. The lecture on each topic will be given by a professor who is specially qualified to speak with knowledge and authority

on his subject. The course is neither historical nor theoretical, but distinctly practical.

EDUCATION

PROFESSOR BOLTON; ACTING PROFESSOR ENSIGN, ASSISTANT
PROFESSOR DORCAS, SUPERINTENDENT McCONNELL

Course 1 (2) is the most desirable as a first course in education. Certain other courses may well be taken at the same time. After course 1 (2) the order is not important. Courses 1 (2) and 5 (6), or 1 (2) and 13 (14) make a good five hour combination. Courses 1 (2), 9 (10), 12, and 13 (14) are especially desirable for normal school graduates and are in no sense a duplication of work done in the normal schools. Advanced courses are also open to those qualified. Some seminary work is especially valuable for such students.

Some work in psychology and in biology is very desirable in preparation for the courses in education. Students expecting to do considerable work in education can profitably take psychology in the sophomore year, and then distribute the work in education through the junior and senior years.

1 (2). PRINCIPLES OF EDUCATION—The meaning of education considered from the standpoint (1) psychology, (2) neurology, (3) biology, (4) anthropology, (5) sociology. Mental development as affected by heredity and environment, the education of the nervous system, mental hygiene; educational aspects of habit, association, memory, imagination, apperception, instinct, sensory training, motor training, observation, feeling, volition, suggestion and imitation. Varieties of education and varying ideals, educational means, educational values. Theories maintained by classical writers on education, such as Plato, Comenius, Pestalozzi, Froebel, and Herbart; contemporary writers as Hall, Harris, Rein, Dewey, etc. A study of such questions as the culture epochs, concentration, correlation, nascent periods,

etc. Application of the foregoing to the making of courses of study and to teaching.

Two sections, throughout the year; Mon., Wed., Fri., at 10:00. Professor BOLTON. Mon., Wed., Fri., at 9:00. Assistant Professor DORCAS.

5 (6). **METHODOLOGY AND TECHNIQUE OF INSTRUCTION**—A careful study of the fundamental principles of methodology of teaching, together with demonstrations of library and laboratory accessories. The major part of the time will be devoted to high school subjects, though the relation of elementary to higher instruction will be considered. Designed to be thoroughly practical. Members of the faculty from several other departments frequently contribute lectures on the teaching of their own subjects in the high school. During the past, the heads of departments of English, history, political science, botany, mathematics, and morphology have given such special lectures. Similar lectures may be expected again. Through the kindness of school officials, students will be permitted to visit the city schools to observe methods and school organization.

Two sections, throughout the year; Tu., Th., at 10:00, Professor BOLTON. Tu., Th., at 9:00, Assistant Professor DORCAS.

7 (8). **HISTORY OF EDUCATION**—A rapid survey of the education of the Chinese, Egyptians, Hindus, and Persians; a careful consideration of Hebrew, Greek, and Roman education; the tracing of educational activity throughout the Dark Ages, and scholasticism, down to the renaissance; development of the humanistic, realistic, and naturalistic tendencies in renaissance education; a careful study of the more prominent educational reformers, such as Erasmus, Montaigne, Rabelais, the Jesuits, Comenius, Locke, Rousseau, Pestalozzi, Froebel, and Spencer. Assistant Professor DORCAS.

Throughout the year; Tu., Th., at 11:00.

9 (10). **JOURNAL CLUB**—This club meets weekly for the discussion of current educational literature. A report is usually given by some member upon articles of current interest, and then all join informally in the discussion. The following topics are typical: electives, self-government,

manual training, nature study, transportation of children to schools at public expense, medical inspection of schools, etc. It has proven of great mutual benefit to students joining. Professor BOLTON, and Assistant Professor DOBCAS.

Throughout the year; Th., at 4:30.

12. CHILDHOOD AND ADOLESCENCE—A study of the physical, mental, and moral nature of children and the best means of the proper development and training of each. Practical questions of home, school, and social pedagogics will be prominent, e. g., educational value of plays and games, self-government in school, children's interests and how to guide them, the power of imitation, the development of altruism, learning of law and order, children's fears, the nervous child, the troublesome child, eyesight, hearing, school diseases, school hygiene, overpressure in schools, the value of child study to parents and teachers, etc. Professor BOLTON.

Second semester; Tu., Th., at 8:00. (A second section may possibly be offered).

13 (14). THE HIGH SCHOOL—A practical consideration of the problems of the high school, including the place of the high school in an educational system, its relation to the community, organization and management, courses of study, educational values of high school subjects. The high school in its relation to adolescence. To give perspective, the historical development of the American high school, and a comparative view of foreign school systems will be considered. The training of teachers, the success of school systems with reference to (a) the development of the individual, and (b) the demands of society. Professor BOLTON.

Throughout the year; Tu., Th., at 3:30.

COURSES PRIMARILY FOR GRADUATES

17 (18). PHILOSOPHY OF EDUCATION—Advanced course. This course will consist of a more detailed and exhaustive study of some of the questions begun in course 1 (2). Lectures will be given indicating the method of approach and outlining the topic, and then students will be expected to study critically through copious reading, sustained reflection, and, in some cases, observation and experimentation.

Reports upon prepared topics will be submitted for class discussion. Professor BOLTON and Assistant Professor DORCAS.

Throughout the year; Tu., Th., at 2:30.

19. HERBARTIAN DOCTRINES—Herbart's psychological and ethical doctrines in their bearing upon education. A critical consideration of his doctrines of apperception, interest, ethical development, and will training. A sketch of the Herbartian movement in Germany and in America. Teachings of Herbartian disciples. Assistant Professor DORCAS.

Second semester; two hours a week.

20. READINGS IN GERMAN AND FRENCH EDUCATION—Open only to those who have taken advanced courses in education, and who have a reading knowledge of these languages sufficient to make them a means of thought-getting. Readings and translations will not be attempted in class; this period will be devoted to reports upon the thought-content gained through reading. Professor BOLTON.

Second semester; two hours a week.

22. HISTORY OF EDUCATION—Advanced course. Open only to those who have taken course 7 (8) in this subject. An exhaustive study will be made of selected chapters in the history of the development of educational thought. Sources will be investigated whenever available. Lectures, readings, and extended reports. Assistant Professor DORCAS.

Second semester; two hours a week.

23 (24). GRADUATE SEMINARY—Designed to assist graduate students in original research and in the prosecution of thesis work for advanced degrees. A part of the time will be devoted to a critical consideration of technical educational literature and of modern educational problems. For example, during the past year Hall's two volumes on *Adolescence* were read during a part of the course. The special topics naturally are varied from year to year. Professor BOLTON.

Throughout the year; meetings, Mon. or Fri., 4:00 to 5:30.

Credit according to amount of work accomplished.

24 (25). SPECIAL COURSE FOR IOWA CITY TEACHERS—The

work will vary from year to year and be arranged to meet the wishes of those enrolling.

Throughout the year; Tu., at 4:30. Double period. Credit two hours.

26 (27). **SCHOOL SUPERVISION**—Practical problems of school organization and administration such as the making and administration of courses of study; functions of school boards, superintendents and principles; supervision of class work, teachers' meetings, student organizations, etc. Acting Professor **ENSIEN**.

Second semester; Mon., Tu., at 4:00.

Attention is called to the courses especially adapted for teachers, offered by other departments. These courses are of two kinds, (a) those dealing in a specific way with the methodology and technique of high school instruction in those subjects, and (b) those in which the subject matter of instruction is of fundamental importance (and to a certain extent adaptable) in teaching those subjects in a modern manner in the high school. As much high school instruction needs vitalizing by being made more adaptable to the demands of the present, the value of such courses becomes apparent. The following courses in other departments have been especially developed as teachers' courses:

GENERAL ZOOLOGY—Course 3 (4) is especially valuable for high school teachers of zoology. See the department of zoology for complete announcement. Professor **NUTTING**.

TEACHER'S COURSE IN LATIN—Course 30. This course will combine theory, practice, and investigation. The members of the class will serve as assistant teachers in a beginning Latin class, and investigate assigned problems. It is intended for students who have had no experience in teaching Latin. Prerequisite, course 23 or 25, and general psychology. Professor **POTTER**.

Five times a week; three hours credit, second semester.

TEACHERS' COURSE IN ENGLISH—Course 67 (68). Designed especially for teachers of high school English. See the department of English. Professor **ANSLEY**.

The library of the department of education is well equipped with all the standard and many special pedagogical works. All the American educational journals of any

importance, and many English, German, and French periodicals are on file. In all about forty journals are regularly received. The library is thoroughly equipped for graduate work in most lines of educational research. It is especially well equipped for work in educational psychology, philosophy of education, and child study.

NOTE.

The department of education at present administers the following branches of university work besides the regular courses of instruction in the science and art of education:

1. The inspection of affiliated high schools.
2. The work of the university examiner and registrar.
3. A bureau of information concerning teachers' positions.

ZOOLOGY

PROFESSOR NUTTING; PROFESSOR HOUSER, PROFESSOR WICKHAM, DR. STROMSTEN, MR. ANDERSON, MR. EDMONDSON, MR. IVINS

A. ELEMENTARY COURSES

1 (2). ANIMAL BIOLOGY—Lectures and laboratory work introductory to the entire field of animal life. The lectures present the fundamental principles of biological science. In the laboratory, living matter, the cell, elementary vital phenomena, and the unicellular organisms are first considered. Later, studies are made of a representative of each of the chief animal groups,—the activities characteristic of it; its natural environment; the structure of its adult form, both anatomical and microscopical; its life-story. In the second semester, emphasis is placed on the structure of vertebrates and the physiological processes essential to animals. Professors HOUSER, Dr. STROMSTEN, and assistants.

Throughout the year. Lectures Tu. and Thu. at 9:00; laboratory, two afternoons of two hours each per week. Credit, four hours.

3 (4). GENERAL ZOOLOGY—This is essentially a lecture

course to be illustrated by abundant material from the museum supplemented by lantern slides. It has the double purpose of furnishing a general survey of the field of zoological science for those students who have no present intention of specializing in this field, and of furnishing a bird's-eye view as an introductory course to those who intend to take further work in the department, especially in comparative, systematic and speculative zoology.

The course is intended to be coordinate with Professor Macbride's "General Botany." The courses in general zoology and general botany may be taken in combination by those who desire a brief survey of biological science, and thus constitute a combination course of four hours per week. Open to all students. Professor NUTTING.

Wed. and Fri., throughout the year. Credit two hours.

5 (6). GENERAL ENTOMOLOGY—An introductory course, covering briefly the history and development of the science, the anatomy of insects and the principles of their classification. It affords, as well, a more detailed study of the important groups. Not open to freshmen. Professor WICKHAM.

Throughout the year; Mon., Wed., Fri. Credit, three hours.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

7. MICROSCOPIC ANATOMY—A laboratory course, accompanied by lectures, demonstrations, and constant use of the reference library. The microscopy of the tissues and organs of vertebrates is the primary end in view, but lower animals are touched upon wherever desirable. The work includes the principles and more general methods of investigation, particularly fixing, imbedding, sectioning, staining, and mounting. The training in technique offered by this course is a necessary preparative for all of the more advanced courses offered by the chair of Animal Biology. Prerequisite; course 1 (2), or the equivalent. Professor HOUSER, Dr. STROMSTEN and Mr. IVINS.

First semester; Mon., Wed., Th., Fri., two hours each; lectures at 10:00. Credit, four hours.

8. EMBRYOLOGY OF VERTEBRATES—Lectures on the com-

parative embryology of vertebrates, supplemented by required reading. Demonstrations and practical studies of germ cells, oögenesis, spermatogenesis, fertilization of the ovum, cleavage of the fertilized egg, development of the germ-layers, and formation of the embryo. After the first of April, the laboratory work consists of the preparation and study of the chick at successive stages of development during the first five days of incubation, with contributory studies from the lower vertebrates. Prerequisite; course 7. Professor HOUSER, Dr. STROMSTEN and Mr. IVINS.

Second semester; Mon., Wed., Th., Fri., two hours each; lectures at 10:00. Credit, four hours.

9. COMPARATIVE ZOOLOGY OF INVERTEBRATES—This will be a modification of the present course in systematic zoology, and will consist of laboratory work in which the various classes of invertebrate animals will be compared by the use of the exceptionally large series in the museum, their resemblances and differences pointed out and described, and their habits and relationships studied. This work will be supplemented by lectures and illustrations by the instructors. Open to all students except freshmen. Professor NUTTING and Mr. EDMONDSON.

Mon., Tu., Wed., Th., throughout the first semester. Credit, four hours.

10. COMPARATIVE ZOOLOGY OF VERTEBRATES—This is a continuation of course 9 and will embrace similar work, particularly with mammals and birds, together with field work in the Spring. The comparative osteology of the Mammalia will be particularly emphasized. It is the purpose to enable the student to readily identify the mammals and birds of the United States, and also to become acquainted with their habits and ecology. Professor NUTTING and Mr. EDMONDSON.

Mon., Tu., Wed. and Th., throughout the second semester. Credit, four hours.

11 (12). PRACTICAL ZOOLOGY—The study of injurious and beneficial species of animals of all classes, with special reference to the principles involved in the problems of control or preservation. Open to all students except freshmen. Professor WICKHAM.

Throughout the year, Mon., Wed., Fri. Credit, three hours.

13. **THE ANIMAL CELL**—Lectures, reading, and laboratory studies. The lectures treat of the rise and development of the cell-theory, the general morphology of the animal cell, the microscopical structure of living substance, the chemistry of protoplasm, the transformation of matter and energy in cell, the reproduction of the cell, the facts and theories of heredity, and the limiting conditions of life. The laboratory work is designed to accompany the lectures. The more important monographs in this field are utilized throughout. Prerequisite; courses 7 and 8. Professor **HOUSER** and assistants.

First semester, Wed. and Fri., at 9:00. Credit, two hours.

14. **COMPARATIVE NEUROLOGY**—A course for the more thorough study of the structure and physiology of the nervous system. The scope of the work includes a review of the general phenomena of irritability, primitive nervous mechanisms, types of invertebrate nervous systems, the differentiation of nervous structures in the vertebrate series, and the architecture of the mammalian nervous system. The topics are presented by lectures and demonstrations, anatomical work, and microscopical studies employing modern neurological technique. Prerequisite; courses 7 and 8. Professor **HOUSER** and assistants.

Second semester, Wed. and Fri., at 9:00. Credit, two hours.

15 (16). **LECTURES ON SPECULATIVE ZOOLOGY**—This course is devoted to a presentation of the more prominent theories concerning the origin and the development of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts and intelligence of animals. Open to juniors and seniors. Professor **NUTTING**.

Throughout the year; Tu., Th. Credit, two hours.

17 (18). **EXPERIMENTAL BIOLOGY**—An advanced course for the more precise study of the relations between the animal organism and its environment. Laboratory work, ref-

erences to special monographs, and the preparation of written reports. The experimental work involves a study of: (a) the effects upon protoplasm of chemical and physical agents; (b) the factors which determine the course of development; (c) the phenomena of regeneration in representative forms. Prerequisite; courses 7 and 8. Professor HOUSER.

Throughout the year; two laboratory periods a week. Credit, two hours.

19 (20). **SYSTEMATIC ZOOLOGY**—A laboratory course during which the student may become thoroughly acquainted with some definite group of animals, several of which are now sufficiently represented in our museum to make systematic work profitable to the student. The literature in the departmental library will be extensively used in this course. Prerequisites; courses 1 (2), or 9 (10), or 5 (6). Professor NUTTING.

Throughout the year, as arranged.

21 (22). **ENTOMOLOGICAL METHODS**—Instruction in methods of collecting, mounting and preserving insect specimens. A certain amount of field work will be required in this course, which is intended to supplement that in General Entomology. Professor WICKHAM.

Hours as arranged; credit in accordance.

23 (24). **COMPARATIVE ANATOMY OF VERTEBRATES**—This course is designed for those who are especially interested in the problems of vertebrate anatomy; it may be made introductory to research or to the field of human anatomy. Anatomical and microscopical studies of the protochordates, exemplified by *Amphioxus*, a tunicate, and *Balanoglossus*; followed by the dissection of *Petromyzon*, *Mustelus*, the skate, cat-fish, *Necturus*, the frog, the turtle, the pigeon, and the rabbit. Lectures and reviews, with reading from Wiedersheim's *Comparative Anatomy of Vertebrates*, Gegenbaur's *Vergleichende Anatomie*, and other works. Prerequisite; courses 7 and 8. Dr. STROMSTEN and Mr. IVINS.

Throughout the year; one lecture and one laboratory period a week. Credit, two hours.

25 (26). **INVERTEBRATE EMBRYOLOGY**—Reading, conferences, and laboratory studies introductory to the development of chosen invertebrates. This course, while general in

its scope, is particularly helpful to those expecting to pursue work at seaside laboratories. The course is based on Korschelt and Heider's *Text-Book of the Embryology of Invertebrates*, but the student is encouraged throughout to refer to original sources so far as these are accessible. Prerequisites; courses 7, 8 and 13. Professor HOUSER.

Throughout the year, two periods per week. Credit, two hours.

C. COURSES PRIMARILY FOR GRADUATES

27 (28). SEMINARY IN ANIMAL BIOLOGY—Weekly meetings of the instructors and advanced students in laboratory courses for the presentation of papers, the review of literature, and informal discussions. The primary object is to acquaint those devoting especial attention to animal biology with some of the aims and problems of current investigation. Professor HOUSER.

Throughout the year, one period a week. Credit, one hour.

29 (30). RESEARCH IN SYSTEMATIC ZOOLOGY—This differs from courses 19 (20) in that original work resulting in original results will be expected. Prerequisites, courses 1 (2) and 9 (10); or courses 19 (20). Professor NUTTING.

31 (32). RESEARCH IN ANIMAL BIOLOGY—Original investigation of a specific problem in animal biology. The subjects assigned for research will be in experimental biology, cytology, neurology, and embryology. For graduate students having the requisite preliminary training in biological work. Professor HOUSER.

Throughout the year, five periods a week.

33 (34). RESEARCH IN ENTOMOLOGY — Prerequisite, courses 5, (6), in addition to such other work in the department as may be accepted as suitable preparation. Professor WICKHAM.

35 (36). RESEARCH IN SPECULATIVE OR PRACTICAL ZOOLOGY—This course is intended to be coordinate with courses 29 (30); 33 (34). Professor NUTTING and Professor WICKHAM.

BOTANY

PROFESSOR MACBRIDE; PROFESSOR SHIMEK.

1. **PLANT HISTOLOGY AND PHYSIOLOGY**—An elementary laboratory course in histology, accompanied by lectures on the fundamental physiological processes in plants, with special reference to the origin of the principal groups of plant-products, such as carbohydrates, proteids, etc. Professor SHIMEK.

Two hours a week during the first semester.

2. **GENERAL PLANT PHYSIOLOGY**—A continuation of course 1, devoted wholly to plant physiology. Professor SHIMEK.

Two hours per week during the second semester.

3 (4). **PLANT ECOLOGY**—A course of lectures, many of them illustrated, supplemented by collateral reading, but based chiefly upon field-observations and investigation. The most important problems of ecology in the broadest sense are discussed and illustrated by field and laboratory work. The local flora, developed under the diversified conditions existing in the region about the University, furnishes abundant material for the study and illustration of the more important phases of modern ecology.

This course is especially recommended to those intending to teach. Professor SHIMEK.

Three hours a week; throughout the year, Mon., Wed., Fri.

5. **GENERAL PLANT HISTOLOGY**—This course requires eight hours a week in the laboratory. Daily lectures accompany the laboratory work. In connection with this course the student receives special instruction in the preparation of sections, staining, mounting, etc. Professor MACBRIDE.

First semester; Mon., Tu., Wed., Th.

6. **PLANT MORPHOLOGY**—This course consists of lectures and laboratory work, and is intended to illustrate the structure and life-history of the several types presented by the vegetable kingdom. Goebel's *Outlines of Classification* is used as a basis, but all the leading text-books are at the service of the student.

Special attention is paid to all available forms of our cryptogamic flora; slime moulds, schizophytes, diatoms, algæ, fungi, mosses, ferns, and their allies are successively passed in review. This course is open to all students. Professor MACBRIDE.

Second semester; Mon., Tu., Wéd., Th.

7 (8). PLANT EMBRYOLOGY AND CYTOLOGY—A special laboratory course with collateral reading. This course is confined chiefly to the consideration of the embryology of phenogamous plants. Some plant is selected by the student and its whole life-history traced. Professor MACBRIDE and assistant.

Throughout the year as arranged.

9 (10). GENERAL BOTANY—A course of popular lectures and special studies intended to illustrate the purpose, method, and scope of present botanical research, the progress of botanical science in recent years, and the general economic importance of the subject. The lectures are illustrated by material from the herbarium and the field, and no effort is spared to give the course the highest practical value. This course is open to all students after the first year. By special arrangement, students taking the course may have the advantage of laboratory work, not to exceed four hours per week.

A course of illustrated lectures accompanies this course. Professor MACBRIDE.

Two hours a week; throughout the year.

11 (12). EXPERIMENTAL PLANT PHYSIOLOGY—This is a course in experimental laboratory field work, and includes the investigation of the processes of absorption, assimilation and respiration in the green plant, including the attendant phenomena of transpiration, various movements in plants, etc. Open only to those who have had course 1 or its equivalent. Professor SHIMEK.

Two hours a week; throughout the year.

13. GENERAL MYCOLOGY—This is a course in the study of fungi, and consists of laboratory work, supplemented by lectures, experiments, and collateral reading. It is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are

aided by extensive mycologic literature, *exsiccati*, etc. Professor MACBRIDE.

First semester; two hours a week.

14. PLANT PATHOLOGY—A study of the causes of plant diseases and deformities. Special attention is given to pathological organisms, and to external conditions producing pathologic conditions in the plant. Professor MACBRIDE.

Second semester; two hours a week.

15 (16). SPECIAL SYSTEMATIC WORK—The large collections in the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE, and Professor SHIMEK, according to the group chosen.

Throughout the year as arranged.

17 (18). SPECIAL APPLIED BOTANY—A course of reading and laboratory study for students of pharmacy and medicine. The official *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin, and relationships. Professor MACBRIDE.

Throughout the year as arranged.

19 (20). ECONOMIC BOTANY—A lecture, laboratory, and field course presenting a view of the plant world with reference to economic uses. The principles of forestry, and other economic branches related to botany, are discussed, and special plant products of use to man, such as woods, fibres, etc., are considered. This course is also supplemented by laboratory work. Professor SHIMEK.

Throughout the year; two hours a week.

21 (22). SEMINARY—A special course in reading and study of current literature is arranged for such students as have completed at least the equivalent of courses 3 and 4 in botany. Students are expected to prepare written reviews and criticisms of the literature presented, to engage in discussion of topics especially assigned, and to carry forward at appropriate seasons special investigations in the field as directed. Professor MACBRIDE, and Professor SHIMEK.

Throughout the year; one hour a week.

23 (24). **THESIS COURSE**—Designed for such students, either graduates or others, as desire to undertake problems of original research. Professor MACBRIDE, and Professor SHIMEK.

Throughout the year as arranged.

25. **DENDROLOGY**—A brief course in the study of the stems, buds, leaves, flowers and fruits of local native and cultivated trees with a view to the ready recognition of species in the field. Professor SHIMEK.

First semester; one hour a week.

26. **DENDROLOGY**—A comparative microscopic study of woods with special reference to quality. A study of the grain, color and other striking characters of wood for purposes of recognition. Attention is also given to causes of decay of wood. Professor SHIMEK.

Second semester; two hours a week.

27. **ARBORICULTURE**—The study of the life-history of a tree; its mode of growth and repair. The effect of environment on trees. The selection, planting and treatment of trees for streets, lawns, and parks. The course consists of lectures, many of which are illustrated, and of field-work, and is open to more advanced students in botany. Professor SHIMEK.

First semester; three hours a week.

28. **ARBORICULTURE**—A continuation of course 27, with a large part of the time, especially during the third quarter, given to such features of tree-culture as may be taught with profit in the public schools. Professor SHIMEK.

Second semester; three hours.

ADVANCED COURSES

Courses 7 (8), 11 (12), 13, 21 (22), 23 (24), 26, and 27 (28) are designed chiefly for graduate students, but advanced students in botany may be admitted.

TECHNICAL COURSES

29 (30). **SILVICULTURE**—The perpetuation of the forest. Methods of improving forests. The value and treatment of mixed and pure stands. The determination of the rate of growth. The principles and practices of reforestation. A

portion of the course in mid-winter consists of lectures and reading on silviculture in foreign countries. Tree-plantation work will be continued in connection with this course. Professor SHIMEK.

Three hours throughout the year.

31. **FOREST PRODUCTS**—A discussion of the value of various products of the forest, the uses to which they are put, and the manner in which they are obtained and treated. Professor SHIMEK.

Two hours a week during the first semester.

32. **FOREST MENSURATION**—Practical methods employed in the determination of the contents of logs, standing trees, entire stands, etc. Further practice in the determination of the age and rate of growth of trees will be given. Professor SHIMEK.

Two and one-half hours a week during the second semester.

33. **LUMBERING**—The methods of lumbering practiced in this country, including methods of transportation in the forest. Attention will also be given to milling and manufacturing operations. In connection with this course students will be expected to spend two or three weeks in lumber camps during a holiday vacation.

Three hours a week during the first semester.

34. **FORESTRY IN THE UNITED STATES**—Former extensive forests, and their destruction by wasteful methods. The physiographic and industrial consequences. The work of the U. S. Bureau of Forestry. The forest policy of the general governments and of the several states. Forestry in the Philippines and Porto Rico. Healthfulness, climatic conditions, etc.

Five hours a week during the second semester.

36. **FOREST MANAGEMENT**—The management of forest areas with a view to continued profitable yield. The preparation of working plans for larger forest areas. Each student will prepare a working plan for a selected area. The plan will include maps, estimates of timber, best methods of cutting and handling, subsequent treatment of tract, etc.

Three hours a week during the second semester.

38. **FOREST PROTECTION**—The discussion of methods of

protecting the forest against fires, parasites, cold winds, and other injurious agencies.

Two hours a week during the second semester.

40. **HISTORY OF FORESTRY**—A lecture and reading course reviewing the development of forestry in foreign countries, and in the United States.

One hour a week during the second semester.

GEOLOGY

PROFESSOR CALVIN; PROFESSOR WILDER, MR. BRYDEN

A. COURSES IN GEOLOGY FOR UNDERGRADUATES

1 (2). **PRINCIPLES OF GEOLOGY**—This course is designed to present the fundamental facts of geology for students who wish to become acquainted with the principles of the science without making a specialty of it. Lectures, illustrated with museum specimens, views, maps, and microscopic preparations. Professor CALVIN.

The course may be supplemented by course 1 in astronomy.

Throughout the year; twice a week, Tu., Th., at 9:00.

3. **MINERALOGY, BRIEF COURSE**—This course is intended to give a practical knowledge of the common minerals through familiarity with their physical properties and associations. Instruction is given in the lecture room and laboratory. Each student will determine the physical properties of some 2,000 unlabeled specimens. Wherever necessary to render determinations positive, blowpipe tests will be introduced. Prerequisite, general chemistry.

Mon., Wed., and Fri., at 9:00. First semester, laboratory periods.

This course is required of all civil engineering students and may be elected by students in other departments. Professor WILDER.

4. **GENERAL AND ECONOMIC GEOLOGY**—This course is planned for those who wish to know something of the fundamental principles of geology, and at the same time are particularly interested in the economic aspects of the science. The great earth forming forces are considered,

particularly with reference to their bearing on engineering problems and the economic products which have resulted from their operation. The course will include a study of the common rocks and their properties; and the nature of deposits of valuable minerals. Prerequisites, general chemistry and mineralogy.

Second semester, Mon., Wed., and Fri., at 9:00.

Required of civil engineering students, elective for others. Professor WILDER.

5. PHYSICAL AND DYNAMICAL GEOLOGY—In this course the principles of general geology are discussed so far as they relate to the destructive, constructive, and other dynamic forces which operate to bring about change on the earth's surface. Especial attention is given to the facts of rock-making, continent-making, and mountain-making, together with the evolution of the major and minor topographic forms of the North American continent. Large series of rocks, minerals, maps, lantern slides, photographs, and models afford the materials for lecture illustration and laboratory study. Professor CALVIN.

Lectures and laboratory work; Mon., Tu., Th., Fri., first semester, at 10:00.

6. HISTORICAL GEOLOGY—In this course attention is given to the time periods and rock systems recognized by geologists, to the physical and physiographic conditions under which the successive rock strata of North America were deposited, and to the lithology, geographical distribution, economic products, and typical faunas of the several formations, particularly those of the Mississippi Valley. Professor CALVIN.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

11.(12). PETROLOGY—This course will include:

(a). Crystallography; a study of the properties of crystals, the process of crystallization and the crystal systems, with laboratory exercises using natural crystals, crystal models, and microscopic sections of crystals.

(b). Descriptive and determinative mineralogy of the rock-making minerals.

(c). The mineralogical and chemical composition of rocks, their origin, structural features, and classification.

The laboratory equipment for this course consists of carefully selected collections representing all the principal rock-making minerals, rock families, and rock types, together with several hundred thin sections for study with the microscope, and a number of the latest and best petrographical microscopes. Professor WILDER.

First semester; daily. Lectures and laboratory work, 1:30 to 3:30.

13 (14). INVERTEBRATE PALEONTOLOGY—The course in paleontology is designed primarily to give the student such acquaintance with fossil faunas as will enable him to determine the age of rocks containing recognizable organic remains. The principles of classification are studied, and the principal fossil types are carefully described from museum material or from specimens collected in the field. Professor CALVIN.

Throughout the year; Tu., Wed., Th., Fri., at 8:00.

15 (16). GEOLOGY OF IOWA—This course is offered to students who have had the equivalent of courses 3 and 4, or 3 and 5, and is intended for those who, for any reason, desire an intimate knowledge of the geology of the state. To count four hours for one, or two semesters. Hours arranged to meet the convenience of students. Professor CALVIN.

17 (18). PETROLOGY—Advanced work is offered to students who have taken a course in petrology. The work will consist in the careful study of the rocks of a selected region, and the preparation of a thesis on the same. The course may be taken so as to count two, or four hours through the year. Professor WILDER.

C. COURSES PRIMARILY FOR GRADUATES

19 (20). RESEARCH WORK IN PALEONTOLOGY—This course may be taken as a major or a minor by candidates for graduate degrees. It may embrace such problems as the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological faunas, the geographical and geological range of

certain zoological groups of organisms, or the evidences of descent in successive geological faunas. Length of course, from one to three years. Professor CALVIN.

21 (22). FIELD WORK IN GEOLOGY—This work may cover any one of a large range of subjects. For example, it may include the careful study of the indurated rocks of some selected area, making sections, correlating outcrops, mapping the geology, and writing a report. The study of Pleistocene geology in Iowa affords many interesting problems relative to the age and composition of the drift in different localities, the characteristics and origin of the crystalline boulders, the origin and distribution of the loess, and many other questions. The work may be directed by Professor CALVIN or Professor WILDER.

23 (24). RESEARCH WORK IN ECONOMIC GEOLOGY OR MINERALOGY—The work in this course will depend largely on the previous preparation of the student. It may consist of detailed study of some geological field of economic importance, or of some mineral or group of minerals and the related industries. The credit will depend upon the nature of the work and the time spent. Professor WILDER.

31 (32). MINERALOGY FOR PROSPECTORS—This course is intended to give the student such a familiarity with the physical characteristics and associations of minerals as will enable him to determine them with considerable accuracy without the aid of blowpipe or reagents. A large amount of labeled material is examined, and a still larger number of unlabeled specimens are given the student for identification. Such blowpipe practice as is deemed necessary to render determinations positive is included during the second semester. Professor WILDER.

Lectures Monday, Wednesday and Friday with laboratory work throughout the year. Lecture hour, 10:00.

Prerequisite, general chemistry.

33 (34). THE NATURE AND ORIGIN OF ORE DEPOSITS—This course aims to study ore deposits in a way that will be of value to the prospector and mine operator. It will cover the more practical parts of the publications of Kemp, Lewis, De Launay, Posepny, and papers prepared for the United States Geological Survey, and the American Institute of Mining Engineers.

Twice a week, Tuesday and Thursday, at 11:00 throughout the year. Professor WILDER.

Prerequisite, general chemistry. Mineralogy must be taken either before or with it. Course 31 (32) may advantageously be taken during the same year.

CHEMISTRY

PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE, ASSISTANT PROFESSOR KARSLAKE, MR. BRYDEN, MR. POORE, MR. REMINGTON, MR. BROWN

The following courses are offered. Regarding their arrangement into a symmetrical four year course of study, or the proper selection of electives as a preparation for teaching, research, or the pursuit of some of the branches of chemistry as a profession, students are urged to consult freely the head of the department.

INORGANIC AND GENERAL CHEMISTRY

1 (2). **INORGANIC CHEMISTRY**—The course extends through the year and consists of lectures, recitations and laboratory work. The lectures are designed not only as a fundamental course for those who intend to specialize in chemistry but also to prepare those who desire to give instruction in the subject in the secondary schools. In addition they are planned to serve as a chemical foundation for anyone who wishes to devote himself to other branches of pure or applied science and whose time available for chemistry is limited; they will be illustrated by experiments. The laboratory work gives the student an opportunity to learn chemical manipulation and to study at closer range the more important elements and compounds, and the principal forms of chemical action. The lecture course may be taken in connection with 5 (6). Professor ROCKWOOD, Mr. REMINGTON.

Lectures and recitations, three hours; laboratory once a week.

3. **INORGANIC CHEMISTRY**—This includes as much of the science as is essential for students who are preparing

for professional work in which chemistry is a fundamental subject. It is taught by experimental lectures and recitations. Assistant Professor VON ENDE.

First quarter, three hours; second quarter, two hours, each week.

5 (6). INORGANIC CHEMISTRY—The non-metals and metals. A laboratory course. It consists chiefly of experiments, both qualitative and quantitative, illustrating the general principles of chemical processes, together with the preparation and study of the properties of the more important inorganic compounds. The elements of qualitative analysis are also considered. This course is primarily designed for chemists, though other students are eligible. It must be preceded or accompanied by course 1 (2) or its equivalent. Assistant Professor KARSLAKE.

Throughout the year, six hours a week.

9 (10). GENERAL CHEMISTRY—A course of lectures and recitations covering both inorganic and organic chemistry. Mr. POORE.

11 (12). GENERAL METALLURGY—This is designed especially for students of mining engineering but is open to those who are qualified for it. It includes the methods used for the reduction of metals from their ores and is taught by lectures, recitations and laboratory work. Visits to metallurgical works are planned for the vacations. General inorganic chemistry and qualitative analysis are prerequisites. Mr. BRYDEN.

Three hours each week; throughout the year.

14. a. SPECIAL METALLURGY—A course for students of civil and mechanical engineering, dealing particularly with the metallurgy of iron, steel and copper. Mr. BRYDEN.

Third quarter: three hours a week.

19 (20). INDUSTRIAL CHEMISTRY—Laboratory Course. This course consists essentially of a series of experiments, both qualitative and quantitative, illustrating the general principles of chemical processes as applied to the preparation and purification of some of the more important inorganic technical products on a scale sufficiently large to determine with considerable accuracy the factors and conditions upon which the economy of the process depends.

Prerequisite; elementary inorganic chemistry and qualitative analysis. Assistant Professor KARSLAKE.

First or second quarters; three to six hours a week.

22. HISTORY OF CHEMICAL THEORIES—Lectures on the development of chemical theory, with particular attention to the post-phlogiston period. Assistant Professor VON ENDE.

Second semester; once a week.

ANALYTICAL CHEMISTRY

21 (22). QUALITATIVE ANALYSIS—The work is for the most part done in the laboratory although lectures and recitations will be included as may be necessary. The reactions of the bases and acids will be studied, both as they show the nature of chemical compounds and their chemical changes, and as they serve for the identification of such substances. Instruction will be given in the wet methods of analysis and also in analysis by the aid of the blowpipe. Course 1 or its equivalent is a prerequisite. Professor ROCKWOOD.

Throughout the year; six hours a week.

23 (24). QUALITATIVE ANALYSIS—Laboratory course. A systematic course in qualitative analysis, including a comparison of the different methods of separation and identification of inorganic substances, both in solution and in the dry condition. The ionic theory and the law of mass action, as applied to the work in this course, are fully discussed. This course must be preceded by 5 (6) and either preceded or accompanied by course 33. Assistant Professor KARSLAKE.

First semester, six hours; second semester, nine hours, a week.

25. ANALYTICAL CHEMISTRY—This course must be taken in connection with course 3 or 4. It will deal chiefly with the reactions of the metals and acids as a preliminary to the analysis of the common minerals and ores. Professor ROCKWOOD, Assistant Professor VON ENDE, Mr. BROWN, Mr. REMINGTON.

First quarter, two periods; second quarter, three periods, each week.

27 (28a). **QUALITATIVE ANALYSIS**—A laboratory course. The student learns the methods of chemical manipulation and the use of apparatus, and also becomes acquainted with the action of reagents and of the common chemicals upon each other. The course includes the chemical examination of water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. Mr. POORE, Mr. REMINGTON.

First semester and first half of second semester; six hours a week.

33. **THEORY OF ANALYTICAL CHEMISTRY**—Lectures once a week, first semester. Prerequisite, inorganic chemistry and qualitative analysis, the latter of which may be taken during the same semester. Assistant Professor VON ENDE.

35 (36). **QUANTITATIVE ANALYSIS**—Elementary course. A laboratory course in the principles of quantitative analysis, consisting of practice in the gravimetric and the volumetric analysis of the more simple substances together with conferences, discussions and assigned readings. Prerequisite; elementary inorganic chemistry and qualitative analysis. Assistant Professor KARSLAKE.

Throughout the year; three to fifteen hours a week. Work in this course may be begun at the beginning of any semester. Though not required it is recommended that this course be preceded or accompanied by course 33.

37 (38). **QUANTITATIVE ANALYSIS**—Advanced course. This laboratory course aims to specialize to a considerable extent on the more difficult methods of analysis. The analysis of minerals, alloys, etc., will be taken up as circumstances permit. The work is designed to give the student such general training as will enable him to deal intelligently and successfully with analytical problems. Prerequisite: course 35 (36) or its equivalent. Assistant Professor KARSLAKE.

Throughout the year, three to fifteen hours a week. The course may be taken up at the opening of any semester.

39 (40). **QUANTITATIVE ANALYSIS**—Engineering course. A laboratory course designed to familiarize the engineering student with the most approved methods for the analysis

of some of the more important industrial and technical products, such as building material, coal and coke, iron and steel, etc. Prerequisite, course 25 or its equivalent. Assistant Professor KARSLAKE.

Throughout the year; six to ten hours a week.

41 (42). **ELECTRO-CHEMICAL ANALYSIS** — Laboratory practicum in the quantitative electrolytic separation of the metals. Assistant Professor VON ENDE.

First or second semester; twice a week. Prerequisite: courses 1 (2) or its equivalent, and 8, 9.

44. **ULTIMATE ORGANIC ANALYSIS**—This is designed to give the student familiarity with, and practice in, the most approved methods for the quantitative determination of carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus and the other elementary constituents of organic substances. Prerequisite; course 35 (36). Assistant Professor KARSLAKE.

Second semester; four hours a week.

45. **WATER ANALYSIS**—This consists of laboratory work on the qualitative and quantitative determination of the impurities in natural waters. Emphasis is laid upon the interpretation of the results in judging of the potability of the water or its suitability for domestic and technical purposes. Prerequisite; inorganic chemistry and qualitative analysis. Assistant Professor KARSLAKE.

First semester; three hours a week.

47 (48). **FOOD ANALYSIS**—A laboratory course in testing foods as to their purity, together with the detection of preservatives, adulterants and substitutes. Prerequisites as in 45. Professor ROCKWOOD.

First or second semester; three to six hours a week.

49 (50). **TOXICOLOGY**—A laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating them from foods, clothing, and various complex mixtures. The post mortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, inorganic chemistry and qualitative analysis. Professor ROCKWOOD.

First or second semester; six hours a week.

52. **ASSAYING**—A laboratory course on the determination of ore values by fire assaying. Prerequisites are inorganic chemistry, qualitative and quantitative analysis. Mr. BRYDEN.

Second semester; four hours a week.

28b. **VOLUMETRIC ANALYSIS**—A laboratory course. Volumetric methods of quantitative analysis are of value because of the rapidity and ease with which they can be executed. The principal ones are taught and the student is given enough practice to familiarize him with them. Mr. POORE, Mr. REMINGTON.

Second semester; second half. Six hours each week.

ORGANIC AND PHYSIOLOGICAL CHEMISTRY

53 (54). **ORGANIC CHEMISTRY** — Elementary course. Lectures, recitations and assigned readings upon the chemistry of the aliphatic and cyclic compounds. This aims to give the student a good general knowledge of the fundamental principles and theories of organic chemistry and is recommended to those who have a special interest in chemistry, biology, medicine, pharmacy or sanitary engineering. Prerequisite; elementary inorganic chemistry. Assistant Professor KARSLAKE.

Throughout the year; two hours a week. It is recommended that this course be accompanied by a laboratory course in organic chemistry.

55 (56). **ORGANIC CHEMISTRY**—Laboratory course. This consists in the preparation of a series of typical compounds of carbon together with a study of their properties, etc., in such a way as to give familiarity with the most important synthetical methods. Prerequisite; course 53 (54). Assistant Professor KARSLAKE.

Throughout the year; four to ten hours a week.

57 (58). **ORGANIC CHEMISTRY**—Advanced course. This is chiefly a laboratory course dealing with a study of some of the more difficult synthetical methods and the preparation of some of the more complex organic compounds. Assigned readings and references to original articles on the special topics studied will constitute an important part of the course. It is open to graduate students and may be

taken as part of their major or minor work for an advanced degree. Prerequisite; a reading knowledge of French and German, and courses 53 (54), and 55 (56). Assistant Professor KARSLAKE.

Throughout the year; ten to twenty hours a week.

59 (60). PHYSIOLOGICAL CHEMISTRY—Lectures and recitations. The course includes the study of the constituents of the animal body together with the chemical changes occurring in the vital processes, also the secretions and excretions of the body. Inorganic and organic chemistry are prerequisites. Professor ROCKWOOD.

Throughout the year; two hours a week.

61 (62). PRACTICAL PHYSIOLOGICAL CHEMISTRY—A laboratory course treating the same subjects as the preceding. Prerequisites are courses 1 and 27 (28). Physiology is helpful but not essential. Professor ROCKWOOD, and Mr. POORE.

Two hours each week; throughout the year.

63 (64). ADVANCED PHYSIOLOGICAL CHEMISTRY—This is planned for those who wish to continue the work of the preceding courses. The methods used in research for the isolation and quantitative determination of some of the body constituents are studied in the laboratory. It may be taken as a minor for an advanced degree. Professor ROCKWOOD.

Six to ten hours a week; prerequisites: 59 (60) and 61 (62).

PHYSICAL CHEMISTRY

7. THEORETICAL AND PHYSICAL CHEMISTRY—Lectures, covering chemical statics and dynamics, thermo- and electro-chemistry. Assistant Professor VON ENDE.

First semester; twice a week.

8. ELECTRO CHEMISTRY—Lectures twice a week and practicum once a week. Assistant Professor VON ENDE.

Second semester.

9 (10). THEORETICAL AND PHYSICAL CHEMISTRY—Laboratory course. Courses 7 and 9, or 8 and 10 may be taken simultaneously or independently. They must be preceded

by at least courses 1 and 2, and by the first two in physics, or their equivalent. Assistant Professor VON ENDE.

First and second semesters; laboratory practicum once or twice a week.

71. APPLIED ELECTRO-CHEMISTRY—Lectures on the application of electro-chemical methods in the arts. Assistant Professor VON ENDE.

First semester; once a week. Prerequisite: courses 1 (2) or 3 and 8.

73 (74). ELECTRO-CHEMICAL PREPARATIONS—Laboratory practicum in the preparation of chemical substances by electrical methods. Assistant Professor VON ENDE.

First or second semester; twice a week. Prerequisite: courses 1 (2) or 3 and 8.

75 (76). SELECTED CHAPTERS FROM PHYSICAL AND ELECTRO-CHEMISTRY—Assistant Professor VON ENDE.

Lectures once a week; first or second semester. Prerequisite: courses 67 and 68.

77 (78). CHEMICAL SEMINAR—This will be held once each week during the year and will be participated in by the instructors and graduate students of the department. Others who have done sufficient chemical work may be admitted with the permission of the head of the department. The primary aim will be to familiarize the student with the original sources of chemical knowledge, especially those found in current literature. This will be done by the preparation of papers and reports, with their discussion and criticism. Professor ROCKWOOD.

79 (80). CHEMICAL RESEARCH—This can be carried on by students who have had the essential preliminary work which includes a reading knowledge of French and German.

Courses are offered in:

Physiological and Sanitary Chemistry. Professor ROCKWOOD.

Physical Chemistry. Assistant Professor VON ENDE.

Organic Chemistry. Assistant Professor KARSLAKE.

PHYSICS

PROFESSOR GUTHE; PROFESSOR SMITH, MR. LORENZ, MR. —, MR. WOOD

A. COURSES FOR UNDERGRADUATES

1 (2). GENERAL LECTURES, RECITATIONS AND LABORATORY PRACTICE—This course is open to all students and may be taken without the mathematics of the freshman year. It is adapted to students desirous of a general knowledge of physics; it is not designed for students pursuing either special work in physics or a technical course.

Throughout the year; lectures and recitations three times a week, at 10:00; laboratory work once a week. Professor SMITH and Mr. —.

3 (4). GENERAL PHYSICS; LECTURES, RECITATIONS AND LABORATORY PRACTICE—This course should be taken by all students intending to continue work in physics, and is required of all students in the engineering courses. It must be preceded by the mathematics of the freshman year.

Throughout the year; lectures and recitations four times a week, at 9:00; laboratory work once a week. Professor GUTHE, Mr. LORENZ and Mr. —.

5 (6). ADVANCED PHYSICAL MEASUREMENTS — Laboratory work two or more times a week. May be taken either semester. Mr. LORENZ.

7 (8). METEOROLOGY AND CLIMATOLOGY—Lectures. Atmospheric movements, temperature and pressure; winds and their classification; weather maps and weather predictions; meteorological instruments; humidity and precipitation. Climate as modified by surface features of the earth; influence on climate of ocean currents and forests; changes of climate.

Throughout the year; lectures twice a week. Professor SMITH.

9. ELECTRICAL MEASUREMENTS—Comparison of resistances; measurement of current, electromotive force, capacity and inductance; calibration of direct current instruments; magnetic measurements.

First semester; recitations once a week, laboratory work twice a week. Professor GUTHE,

11. **OPTICAL PROPERTIES OF CRYSTALS**—A study of interference and polarisation of light, of single and double refraction, with special reference to the optical properties of crystals.

First semester; lectures twice a week. Mr. LORENZ.

13. **ANALYTICAL MECHANICS**—A general course in this subject consisting of daily recitations. Intended primarily for students in engineering.

First semester; daily at 11:00. Professor SMITH.

B. COURSES PRIMARILY FOR GRADUATES

These courses, forming an advanced course in physics, must be preceded by courses 3 and 4 and be preceded or accompanied by courses 5 or 6. A knowledge of calculus is indispensable.

15 (16). **THEORETICAL MECHANICS**—Lectures and recitations three times a week; throughout the year. (a) The laws of motion in general and those methods which are applicable to systems of all sorts. (b) The motion of rigid bodies. (c) Hydrodynamics. Professor SMITH.

18. **THEORY OF SOUND**—Lectures twice a week, second semester. Professor SMITH.

19. **THEORY OF LIGHT**—Lectures twice a week, first semester. Mr. LORENZ.

20. **THERMODYNAMICS**—Lectures twice a week, second semester. Mr. LORENZ.

21 (22). **THEORETICAL ELECTRICITY AND MAGNETISM**—Lectures twice a week, throughout the year. Professor GUTHE.

23. **THEORY OF GASES AND SOLUTIONS**—Lectures twice a week.

24. **ELECTRICITY IN GASES**—Lectures twice a week.

Courses 23 and 24 will be omitted in 1906-1907, but will be given in 1907-1908.

25 (26). **RESEARCH**—Open to students who have a sufficient knowledge of general physics and who have the necessary experimental skill, acquired in courses similar to 5 and 6 above. A reading knowledge of French and German is required. The laboratory will be open to such students throughout the week. Professor GUTHE.

27 (28). **SEMINARY**—In this course the advanced stu-

dents in physics will be expected to prepare papers on special subjects or reports on their own work. Once a week, two hours. Professor GUTHE.

MATHEMATICS

PROFESSOR WELD; DR. DODD, MR. BAKER, MR. THORNE, MR. —.

In the following statement, courses having odd numbers are given in the first semester, those with even numbers, in the second. The suffixes *a* and *b* refer to the first and second quarters of the semester respectively. The grouping and the sequence of courses for the first two years are as follows:

	GROUP (A)	GROUP (B)
	†(Daily)	* (M., Tu., W., Th.)
<i>Freshman</i>		
1st quar.	Algebra, 21a	Alg. I., 3a
2nd "	Trig., 23b	Trig., 7b
3rd "	Anal. Geom., 24	Alg. II., 6a
4th "	Anal. Geom., 24	Graphics, 10b
<i>Sophomore</i>		
1st quar.	Calculus, 25	Anal. Geom., 11a
2nd "	Calculus, 25	Calculus, 13b
3rd "	Calculus, 26a	Calculus, 14a
4th "	Theo. of Eqs., 28b	Calculus, 14b
	GROUP (C)	GROUP (D)
	(Tu., W., Th., F.)	(M., Tu., Th., F.)
<i>Freshman</i>		
1st quar.	Solid Geom., 1a	.....
2nd "	Alg. I., 3b	.....
3rd "	Trig., 8a	Alg. I., 4a
4th "	Graphics	Alg. II., 6b
<i>Sophomore</i>		
1st quar.	Anal. Geom., 11a	Trig., 7a
2nd "	Calculus, 13b	Anal. Geom., 11b
3rd "	Calculus, 14a	Calculus, 12
4th "	Theo. of Eqs., 16b	Calculus, 12

* One of the freshman divisions of group (B) will meet daily and five hours' credit will be given as for group (A).
† Only one of the divisions of group (A), one of the two meeting at 8:00, will be open to liberal arts students. See programme.

Advanced work in mathematics may be begun upon the satisfactory completion of any of the above groups, but students intending to specialize in this subject are advised to elect either group (A) or group (B).

Students in civil, sanitary, electrical, mechanical and mining engineering will be scheduled in group (A).

Group (B) is open to all students who have had three years preparatory work in mathematics, including solid geometry, unless group (A) is prescribed by the course of study pursued.

When only the minimum preparation in mathematics is offered group (C) must be taken.

Group (D) is arranged for those entering at the opening of the second semester.

All courses will be given as indicated, provided the number of students applying shall warrant, except that the hours for the advanced courses are more or less subject to change.

A. COURSES FOR UNDERGRADUATES

1a. **SOLID GEOMETRY**—A course in solid geometry and mensuration for students who have not completed the work in the high school. First quarter; Tu., Wed., Th., Fri., at 10:00. Dr. DODD.

01. **SOLID GEOMETRY**—To be given in 1906-1907 and 1907-1908 for applied science students who have not finished the subject in the high school. First semester; Saturday, 8:00 to 10:00. Dr. DODD.

2b. **SOLID GEOMETRY**—The same as 1a. Fourth quarter.

Not given in 1906-1907.

3a. **ALGEBRA I.**—Exercises in the statement and solution of problems; the theory of the simple and of the quadratic equation; systems of simultaneous equations; ratio, proportion and variation; the theory of exponents; logarithms. First quarter; three divisions; Mon., Tu., Wed., Th., at 9:00 and 2:30; daily at 1:30. Dr. DODD, Mr. BAKER and Mr. THORNE.

3b. **ALGEBRA I.**—The same as 3a. Second quarter; Tu., Wed., Th., Fri., at 10:00. Dr. DODD.

4a. ALGEBRA I.—The same as 3a. Third quarter; Mon., Tu., Th., Fri., at 2:30. Dr. DODD.

6a. ALGEBRA II.—Progressions; properties of series and the development of functions into series; the binomial theorem; rudiments of the theory of equations. Third quarter; three divisions; Mon., Tu., Wed., Th., at 9:00 and 2:30; daily at 1:30. Dr. DODD, Mr. BAKER and Mr. THORNE.

6b. ALGEBRA II.—The same as 6a. Fourth quarter; Mon., Tu., Th., Fri., at 2:30. Dr. DODD.

7a. TRIGONOMETRY—Trigonometric functions and formulae; logarithmic functions; solution of right and oblique angled triangles, both plane and spherical; practical applications to surveying, navigation and mensuration. First quarter; Mon., Tu., Th., Fri., at 1:30. Dr. DODD.

7b. TRIGONOMETRY—The same as 7a. Second quarter; three divisions; Mon., Tu., Wed., Th., at 9:00 and 2:30; daily at 1:30. Dr. DODD, Mr. BAKER and Mr. THORNE.

8a. TRIGONOMETRY—The same as 7a. Third quarter; Tu., Wed., Th., Fri., at 10:00. Dr. DODD.

10b. GRAPHICS—The graphical representation of natural laws and of statistical and observational data; graphical and mechanical solutions of algebraic and transcendental equations; interpolation; Simpson's formula; map projection, etc. A course intended to summarize in a practical way the knowledge of mathematics which the student has thus far acquired and to introduce him to its simpler applications. It is especially designed to meet the needs of those about to begin laboratory work and will also be useful to those expecting to teach either mathematics or material science. Fourth quarter. Four divisions; Mon., Tu., Wed., Th., at 9:00 and 2:30; daily at 1:30; Tu., Wed., Th., Fri., at 10:00. Dr. DODD, Mr. BAKER and Mr. THORNE.

11a. ANALYTICAL GEOMETRY—Rectangular and polar coordinates; examples of loci; the circle, ellipse and hyperbola and their limiting forms; tangents, normals and asymptotes; co-ordinates in three dimensions. First quarter. Two divisions; Mon., Tu., Wed., Th., at 1:30 and Tu., Wed., Th., Fri., at 10:00. Mr. BAKER and Mr. THORNE.

11b. ANALYTICAL GEOMETRY—The same as 11a. Second quarter; Mon., Tu., Wed., Th., at 1:30. Dr. DODD.

12. **CALCULUS**—Differentiation; Taylor's theorem; indeterminate forms; maximum and minimum; tangents, normals and asymptotes; curvature and radius of curvature; integration; applications of integral calculus to problems in geometry, mechanics and physics. Second semester; Mon., Tu., Th., Fri., at 1:30. Dr. DODD.

13b (14a). **CALCULUS**—The same as course 12. Second and third quarters. Two divisions; Mon., Tu., Wed., Th., at 1:30 and Tu., Wed., Th., Fri., at 10:00. Mr. BAKER and Mr. THORNE.

14b. **CALCULUS**—The theory of plane curves. Continuous with the preceding courses in calculus and including the discussion of singular points, envelopes, involutes and evolutes, roulettes, pedals, etc. The student in group (B) may elect instead of this, either 16b or 28b. Fourth quarter; Mon., Tu., Wed., Th., at 1:30. Mr. THORNE.

16b. **THEORY OF EQUATIONS**—Determinants; elimination; complex numbers; equations of higher degrees and their properties; symmetric functions of the roots; location of the roots; approximation to the roots of higher equations with numerical coefficients; solution of cubic and biquadratic equations. Fourth quarter; Tu., Wed., Th., Fri., at 10:00. Mr. BAKER.

21a. **ALGEBRA**—Exercises in the fundamental operations and in factoring; simple and quadratic equations; systems of simultaneous equations; proportion and variation; progressions; the binomial theorem; exponential and logarithmic series; calculation by logarithms. First quarter. Three divisions; daily at 8:00 (two divisions) and 9:00. Mr. BAKER and Mr. THORNE.

23b. **TRIGONOMETRY**—A course covering the elements of both plane and spherical trigonometry, with numerous applications. Second quarter. Three divisions; daily at 8:00 (two divisions) and 9:00. Mr. BAKER and Mr. THORNE.

24. **ANALYTICAL GEOMETRY**—A general course in the analytical geometry of two and of three dimensions. Second semester. Three divisions; daily at 8:00 (two divisions) and 9:00. Mr. BAKER and Mr. THORNE.

25 (26a). **CALCULUS**—This course is similar in scope to 13b (14) but the several topics are more fully treated

and the work is conducted with special reference to the requirements of technical students. First, second and third quarters. Two divisions; daily at 8:00 and 11:00. Professor WELD and Mr. BAKER.

28b. THEORY OF EQUATIONS—Similar to 16b, though for students somewhat more advanced. Fourth quarter. Two divisions; daily at 8:00 and 11:00. Professor WELD and Mr. BAKER.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

31. ADVANCED CALCULUS—A continuation of the elementary courses in calculus, devoted particularly to such topics as the extension of Taylor's series, the series of Lagrange, maxima and minima of functions of two or more variables, transformations of differential equations; variations, etc. First semester; Mon., Wed., Fri., at 10:00. Professor WELD.

32. DIFFERENTIAL EQUATIONS—A general course devoted to the methods of solution of ordinary differential equations. This is open to all students who have completed any one of the groups (A), (B), (C), or (D). Second semester; Mon., Wed., Fri., at 10:00. Professor WELD.

35 (36). DETERMINANTS AND MODERN GEOMETRY—Determinants, the theory of quantics; the principle of invariance; modern analytical geometry of two and of three dimensions. Throughout the year; Tu., Th., at 8:00. Professor WELD.

Not given in 1906-1907.

39 (40). THE THEORY OF FUNCTIONS—Lectures, the works of Durège, Harkness and Morley, and others being used by the students for collateral reading. Throughout the year; Tu., Th., at 8:00. Dr. DODD.

41 (42). FUNCTIONS OF REAL AND COMPLEX VARIABLES—An advanced course in function theory. Throughout the year; Tu., Th., at 11:00. Dr. DODD.

Not given in 1906-1907.

43. DEFINITE INTEGRALS, including a discussion of the beta and gamma functions. Lectures. First semester, Tu., Th., at 10:00. Professor WELD.

Not given in 1906-1907.

44. **ELLIPTIC INTEGRALS AND FUNCTIONS**—Lectures, with problems and practical applications. Second semester; Tu., Th., at 10:00. Professor WELD.

Not given in 1906-1907.

49 (50). **THEORY OF THE POTENTIAL AND SPHERICAL HARMONICS**—The potential function; Laplace's equations of continuity in rectangular, cylindrical and spherical coordinates; Green's transformation; velocity potential; plane wave motion; Fourier's series and integral; application of Fourier's series to problems in acoustics, heat and electricity; physical problems involving cylindrical, zonal and spherical harmonics. This must be preceded by courses 31 (32), and by a course in analytical mechanics. Throughout the year; Tu., Th., at 11:00. Professor WELD.

May not be given in 1906-1907.

55. **THE THEORY OF SURFACES**, with problems. May be given in place of 57, when it will be followed by (58). First semester; Tu., Th., at 1:30. Mr. BAKER.

Not given in 1906-1907.

57 (58). **DIFFERENTIAL EQUATIONS**—An advanced course, including the theories of Sophus Lie. This must be preceded by course 31 (32). Throughout the year, or during the second semester only; Mon., Wed., Fri., at 1:30. Mr. BAKER.

63. **THE METHOD OF LEAST SQUARES**, with numerous applications to the reduction of series of physical observations. First semester; Tu., Th., at 9:00. Professor WELD.

67 (68). **VECTOR ANALYSIS**—A course based upon modern developments of the subject. Lectures and collateral reading. Throughout the year; Tu., Th., at 11:00. Dr. DODD.

Not given in 1906-1907.

71 (72). **GROUP THEORY**—The theory of substitution groups and its application to algebraic equations. Will be given in alternate years with course 57 (58) or 55, (58). Throughout the year; Tu., Th., at 1:30. Mr. BAKER.

99 (100). **THE MATHEMATICAL SEMINARY** is conducted for the benefit of students making a special study of mathematics, and is open to all who have completed elementary calculus. The topics upon which papers are prepared un-

der the direction of the several instructors are such as are suggested by the regular work of the various courses. Throughout the year; Wednesday, 7:30 p. m.

THE LOWDEN MATHEMATICAL PRIZE

Competition for the Lowden mathematical prize of fifty dollars (\$50.00) for excellence in mathematics, established by Mr. Frank O. Lowden, of Chicago, is open to all students who are about to complete in course the work of the freshmen and sophomore years in mathematics, the last year of such work having been done at this University in the regular classes.

The examination upon which the prize is to be awarded will be conducted by the professor of mathematics, and will be held in May, not later than the second Saturday preceding the opening of commencement week. Candidates should prepare for examination in the following subjects: Algebra, plane trigonometry, analytical geometry of two dimensions, the elements of differential and integral calculus.

The prize may be equally divided between not more than two candidates, or may be withheld if it shall appear that the work of no candidate is of a superior order of merit.

ASTRONOMY**PROFESSOR WELD**

The first year of either of the groups (A), (B), (C) in mathematics (See p. 73), or its equivalent, is prerequisite to any of the courses in astronomy. Courses 101 (102) and 103 (104) may be taken either simultaneously or in succession, though the latter may not be given in 1906-1907.

The University is provided with a small but well equipped students' observatory. (See Material Equipment, p. 50).

101 (102). **GENERAL ASTRONOMY**—A course of lectures on descriptive astronomy for the general student. This course may be supplemented by course 1 (2) in geology,

which is given at the same hour, on Tuesdays and Thursdays.

Three lectures a week throughout the year. Mon., Wed., Fri., at 9:00.

103 (104). PRACTICAL ASTRONOMY—The student is taught the use of the sextant, transit instrument, clock, chronograph, etc.; the arrangement of the *American Ephemeris and Nautical Almanac*; and the general principles of time, latitude, longitude, and azimuth determination. The theory of the equatorial telescope with the position micrometer is also explained and illustrated.

Throughout the year: Tu., Th., at 9:00; supplemented by work at the observatory.

May not be given in 1906-1907.

108. ASTRONOMY AND GEODESY—A course for engineering students. Special attention will be given to methods of time, longitude, latitude and azimuth determinations by means of portable instruments.

Second semester only; Mon., Wed., Fri., at 11:30. One or two evening sessions per week during the fourth quarter, in place of the regular forenoon sessions.

MILITARY SCIENCE AND TACTICS

COLONEL CHARLES W. WEEKS, 1ST LIEUTENANT 30TH INFANTRY

Instruction in these branches is prescribed for all male students in the Colleges of Liberal Arts and Applied Science, during the first and second years of residence, except such as are specially excused. Students, who for valid reasons desire to be excused must submit their reasons in writing to the military committee of the faculty on the first Saturday after the opening of the semester.

Those claiming exemption on account of physical disability must present to the committee a certificate from the battalion surgeon, and those desiring credit for work at some recognized military institution must present their credentials at this time. Students entering the University for the first time with junior or senior standing are not required to take this course, but may register for it if they so desire.

All students not excused as above provided will report for duty, to the commandant at the armory at 4:20 p. m. on the Tuesday immediately following the beginning of the semester.

ORGANIZATION

The department is organized for instruction into an infantry battalion, consisting of four companies, a band, and the requisite staff officers. The commissioned officers are selected from the seniors and juniors, the sergeants from the juniors and sophomores, and the corporals from the sophomores and freshmen. The selection is based on the military record of each individual as evidenced by punctuality and regularity in attendance, for both practical and theoretical instruction, military bearing in and out of ranks, and the general aptitude manifested for the work.

UNIFORM

The prescribed uniform consists of a dark blue blouse and trousers, regulation army cap and plain white gloves, and is worn when on duty, although it may be worn at any other time. It may be had from a number of tradesmen of the city at a cost of from \$10.50 to \$13.50. The uniform of the commissioned officer is somewhat more expensive and includes the U. S. Army officer's cap, shoulder straps, and white lisle thread gloves.

COURSES OF INSTRUCTION

Courses of instruction are both practical and theoretical. The practical course is as follows: Infantry Drill Regulations through the school of the battalion in close and extended order. The ceremonies of battalion review, inspection, parade, guard-mounting, and escort to the colors. Infantry target practice. Instruction in first aid to the injured.

The practical instruction for infantry drill, for all classes will be given two hours a week on Tuesdays and Thursdays, during the year from 4:30 to 5:30 p. m.

Target practice, after preliminary instruction in gallery practice in the armory is had, will take place on the university range to the extent of the allowance of ammunition, on favorable afternoons, during the spring and fall quarters at such hours as may be deemed most convenient.

The theoretical instruction will be given for one hour a week during the entire year. All students, required to take military drill, are required to register for the following courses in their order. Classes will be arranged to suit the necessities of the students.

Military Science I. Consisting of *U. S. Infantry Drill Regulations*, and *Manual of Guard Duty*.

Military Science II. *U. S. Infantry Drill Regulations*.

Military Science III. *Firing Regulations for Small Arms*.

Military Science IV. *Field Service Regulations*.

Two semester credits will be allowed for each year of military work, provided at least two full years of the course are taken, but no student shall receive more than six semester credits for military work.

The four credits allowed for the required military course are essential to graduation, and students who for any reason, are excused from this work are required to be registered for physical training. Students, who are excused from both military drill and physical training are deemed to have postponed this work to a subsequent year.

ORGANIZATION OF THE MILITARY DEPARTMENT

CADET BATTALION 1905-1906.

Colonel Charles W. Weeks, (1st Lieutenant

30th Infantry)Commandant

FIELD AND STAFF.

Wylie Webb FayCadet Major

Hiram Price.....Cadet Captain and Battalion Adjutant

NON-COMMISSIONED STAFF.

E. E. Rorick.....Cadet Sergeant Major

J. M. Boland.....Cadet Quartermaster Sergeant

Lorenz Lorenzen.....Cadet Color Sergeant
Frank Vasku.....Cadet Color Sergeant

BAND.

O. E. Van Doren, Cadet Captain.....Director
A. C. Wallace, Cadet 1st Lieutenant.....Drum Major
Albert LeVan, Cadet Sergeant.....Principal Musician

COMPANY "A."

L. W. Lovell.....Cadet Captain
D. W. Miles.....Cadet 1st Lieutenant
I. C. Hastings.....Cadet 2nd Lieutenant

COMPANY "B."

W. D. Middleton.....Cadet Captain
Louis Hoth.....Cadet 1st Lieutenant
E. J. Aguilar.....Cadet 2nd Lieutenant

COMPANY "C."

N. S. Bevins.....Cadet Captain
J. T. Illick, Jr.....Cadet 1st Lieutenant
G. A. Bemis.....Cadet 2nd Lieutenant

COMPANY "D."

F. E. Koeper.....Cadet Captain
C. R. Duncan.....Cadet 1st Lieutenant
David Rodriguez.....Cadet 2nd Lieutenant

MILITARY FIELD DAY, MAY 18TH, 1905.

The "Coast Sword," awarded annually to the Captain of the best drilled company, was won by Captain Harry E. Boies, Company "B."

The "Colonel Burnett Medal" for superiority in marksmanship, for 1905, was awarded to Captain H. C. Danielson, Inspector of Small Arms Practice.

The "H. J. Wieneke Medal" for excellence in Infantry Drill, was awarded to Captain Wylie W. Fay, Company "D."

The "C. Yetter Medal" No. 1, for the best drilled junior, was awarded to Cadet Sergeant W. D. Middleton, Company "B."

The "C. Yetter Medal" No. 2, for the best drilled sophomore, was awarded to Cadet Corporal L. L. Quigley, Company "C."

The "Sueppel Medal" for the best drilled freshman, was awarded to Cadet Private N. M. Baker, Company "B."

JUDGES OF THE COMPETITIVE DRILLS.

Captain Frank Tompkins, 11th U. S. Cavalry, Acting Inspector General, was the judge of the company drills, and Major R. P. Howell, Captain George W. Ball, Jr. and 2nd Lieutenant R. M. Anderson, 54th Regiment Iowa National Guard, served in the same capacity for the individual competitions.

PHYSICAL TRAINING AND ATHLETICS

PROFESSOR CHALMERS; MR. RULE, MISS KASTMAN, MR. CATLIN

The department of physical training offers excellent opportunities to the students of the University for physical education and development and endeavors to combine gymnastic and athletic interests. The new armory and athletic pavilion is thoroughly equipped with the best and most modern apparatus, and offers every inducement for training in gymnastics and outdoor athletics. It is well provided with baths, lockers and dressing rooms. A separate room containing lockers, baths, and other equipment has been set apart for the athletic teams. The floor of the main room of the building will be used for both military drill and class work in physical training. This room is 77x125 feet, contains an indoor baseball cage and nets, three basket ball fields, a tennis court, hand ball courts, two indoor baseball fields, and is surrounded by a concave, composition cork covered track six feet wide and fifteen laps to the mile. Every opportunity is offered for the development of mid-winter and spring sports.

All students excused from military science and tactics are required to take physical training. Four hours credit is given for two years' work, the same as in the military department.

Volunteer classes will be organized to meet three times a week. The privilege of entering these classes is extended to all students of the several colleges of the University.

A physical examination is required of all first-year men. A record is kept of the development of all students registered in this department. Special work will be assigned those needing special attention. The work of the classes is varied and the object of the work will be recreative and to meet the needs of the student for the development of strong healthy bodies.

A series of weekly lectures intended to give students a thorough knowledge of the care of the body and preparation for the teaching of physical training is given. A thorough course in the theory of physical training may be chosen from the work offered by the College of Liberal Arts. The practice of physical training is taught on the athletic field and in the pavilion.

For the benefit of those who expect to use this knowledge in teaching, a statement showing the work done in theory and practice will be issued by the department.

PHYSICAL TRAINING FOR WOMEN.

Close Hall contains a finely equipped gymnasium for the exclusive use of the women attending the University. In connection with the main gymnasium room are dressing rooms, shower baths and 192 lockers.

The apparatus consists of chest weights, traveling rings, flying rings, ladders, vaulting bars, dumb bells, Indian clubs, wands, bounding balls, basket balls and medicine balls. Music is used in all class drills.

The aim and purpose of the work is general physical development to promote health, grace, and poise of bearing. The training is not confined to one system but selects the best elements of all the different systems as taught by the Sargent Normal School of Physical Training.

The gymnasium suit for women requires four yards of double width (54 in.) black brilliantine or serge and consists of three pieces. Butterick's pattern, No. 4509 may be used as a guide in making the suit. Gymnasium shoes are also required.

The work is required of all first and second year students. Each student is given a careful physical examination that the work may be adapted to individual needs and that no student may have more work than she is physically able to do.

Credit to the amount of four semester hours may be earned in physical training provided the student does not less than two full years' work in this department.

All classes will meet on schedule time at the opening of the University in Close Hall gymnasium. Four semester hours credit is given for two years' work in this department.

ACCREDITED HIGH SCHOOLS

The board of regents has adopted the following plan for general high school inspection:

1. Any school may be placed upon the accredited list upon application of its superintendent or principal, and its board of directors, provided the faculty of the College of Liberal Arts is satisfied as to its (a) course of study, (b) methods of teaching, (c) facilities for instruction.

2. The course of study of such a school must be adapted to fitting its graduates for one or more of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. All accredited schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

4. The authorities of accredited schools should report annually to the University all changes made in the courses of study and submit a list of names of the instructors employed in the high school with subjects taught by each.

The following revised rules governing the accrediting of high schools have been adopted by the faculty of the College of Liberal Arts, and are now in force. The attention of the authorities of accredited schools is called to the revised rules in order that they may make such changes in their courses of study and in their plans of work as will enable them to conform fully to the rules.

RULES GOVERNING THE ACCREDITING OF HIGH SCHOOLS

High schools meeting the following conditions may, at the option of the faculty of the College of Liberal Arts, be accredited as making full preparation for one or more college courses; and graduates of such schools will be admitted to the University without being subject to examination

in those preparatory subjects for which proper certificates are presented.

1. The course of study should be not less than four years of thirty-six weeks each in length, following an elementary course not less than eight years in length.

2. The course of study should require of each pupil not more than four recitations daily.

3. The entire time of at least three teachers should be given to instruction in high school branches.

4. The quality of the instruction given and the character of the text-books used should be approved by the faculty.

5. Schools seeking considerable credit in science should demonstrate their ability to do successful laboratory work.

6. Schools seeking considerable credit in history and English should give evidence of a special laboratory equipment for teaching these branches.

Private academies, seminaries, normal schools, or other secondary schools meeting the conditions mentioned above, or their equivalent, may be accepted on the same basis as high schools.

The University, for the present, does not publish a list of accredited schools, but each school so accredited will be kept informed of its standing with the University.

UNIVERSITY EXTENSION

The State University of Iowa was among the first in the United States to attempt to popularize higher education by organizing courses of lectures by University professors at points remote from the institution. For years this work has been carried forward with no small success in all the more important cities of Iowa. As will be seen by reference to the special announcement on this subject, the University offers an unusually extended list of topics to those seeking lectures of University grade. Within certain obvious limits, all the best that is offered at Iowa City, is at the service of every community in Iowa.

In connection with the courses of lectures offered, classes may be organized and systematic work undertaken leading in due process to University credit.

Many of the lectures, especially those pertaining to subjects scientific, are illustrated, and, with little additional cost, a stereopticon is sent with the lecturer to any center.

All interested are referred to the announcement of University extension lectures, to be had by addressing the Secretary or the Director of University Extension, Iowa City, Iowa.

THE GRADUATE COLLEGE

THE GRADUATE COLLEGE

FACULTY AND INSTRUCTORS*

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D., 1877, Yale; Ph. D., 1883, Leipzig; LL. D.,
1895, Williams.

President, 1899.† 603 College St. (108 Old Capitol)

AMOS NOYES CURRIER, B. A., 1856; M. A., 1859, Dartmouth;
LL. D., 1893, Des Moines.

Professor and Head of the Department of Latin Language
and Literature, and Dean of the College of Liberal Arts,
1867. 32 Bloomington St. (108 Liberal Arts)

SAMUEL CALVIN, M. A., 1874; LL. D., 1904, Cornell College;
Ph. D., 1888, Lenox; F. G. S. A.

Professor and Head of the Department of Geology, 1874.
522 N. Clinton St. (108 Science Hall)

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Mon-
mouth; Ph. D., 1895, Lenox.

Professor and Head of the Department of Botany, 1878.
728 Washington St. (206 Science Hall)

†**GEORGE THOMAS WHITE PATRICK**, B. A., 1878, Iowa; B. D.,
1885, Yale; Ph. D., 1888, Johns Hopkins.

Professor and Head of the Department of Philosophy, 1887.
CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell
University.

Professor and Head of the Department of German Lan-
guage and Literature, 1888.

311 N. Capitol St. (101 Liberal Arts)

LAENAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor and Head of the Department of Mathematics, Dean
of the Graduate College, 1886.

612 N. Dubuque St. (113 Liberal Arts)

CHARLES CLEVELAND NUTTING, B. A., 1880; M. A., 1882,
Blackburn University.

Professor and Head of the Department of Zoology, and
Curator of the Museum of Natural History, 1886.

922 E. Washington St. (304 Science Hall)

* The faculty of the University numbers over two hundred professors, instructors and assistants. The following list contains the names of those in the departments offering courses of instruction for graduate students.

† Date following title indicates year of appointment to service in the University. The names are arranged in groups according to seniority of appointment to present rank.

‡ Absent with leave.

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B. D., 1881, Yale; D. C. L., 1898, Penn College.

Professor and Head of the Department of Political Economy and Sociology, and Director of the School of Political and Social Science, 1889.

11 E. Bloomington St. (205 Liberal Arts)

ELBERT WILLIAM ROCKWOOD, B. S., 1884; M. A., 1901, Amherst; M. D., 1895, Iowa; Ph. D., 1904, Yale.

Professor and Head of the Department of Chemistry and Toxicology, 1888.

1011 Woodlawn. (Chemical Laboratory)

WALTER LAWRENCE BIERRING, M. D., 1892, Iowa.

Professor of Theory and Practice and Clinical Medicine, Vice-Dean and Secretary of the Faculty, College of Medicine, 1893.

Cor. Governor St. and Iowa Ave. (Laboratory Hall)

WILLIAM CRAIG WILCOX, B. A., 1888; M. A., 1891, University of Rochester.

Head of the Department of History and Professor of American History, 1894.

629 N. Dubuque St. (222 Liberal Arts)

GILBERT LOGAN HOUSER, B. S., 1891; M. S., 1892, Iowa; Ph. D., 1901, Johns Hopkins.

Professor of Animal Biology, and Director of the Zoological Laboratories, 1892.

430 Iowa Ave. (101 Science Hall)

BENJAMIN FRANKLIN SHAMBAUGH, B. Ph., 1892; M. A., 1893, Iowa; Ph. D., 1895, Pennsylvania.

Professor and Head of the Department of Political Science, 1895.

219 N. Clinton St. (202 Liberal Arts)

WILLIAM ROBERT WHITEIS, B. S., 1892; M. D., 1895; M. S., 1895, Iowa.

Professor of Obstetrics in the College of Medicine, 1898.

220 S. Johnson St.

LEE WALLACE DEAN, B. S., 1894; M. S., 1896; M. D., 1896, Iowa.

Professor of Ophthalmology, Otology, Rhinology and Laryngology, and Director of the University Hospital, 1898.

3 Bloom Terrace. (University Hospital)

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor and Head of the Department of English, 1899.

1041 Woodlawn. (227 Liberal Arts)

LEONA ANGELINE CALL, B. A., 1880; M. A., 1883, Iowa.

Professor of Greek Language and Literature, 1885.

32 Bloomington St. (106 Liberal Arts)

HENRY EVARTS GORDON, B. A., 1879; M. A., 1901, Amherst.

Professor of Public Speaking, 1900.

303 N. Capitol St. (312 Liberal Arts)

ARTHUR FAIRBANKS, B. A., 1886, Dartmouth; Ph. D., 1890, Freiburg, I. B.

Professor of Greek Literature and Archeology and Head of the Department of Greek and Secretary of the Graduate Faculty, 1900.

7 E. Bloomington St. (310 Liberal Arts)

FREDERICK ELMER BOLTON, B. S., 1893; M. S., 1896, Wisconsin; Ph. D., 1898, Clark.

Professor and Head of the Department of Education; Director of the Summer Session, 1900.

1019 College St. (217 Liberal Arts)

BOHUMIL SHIMEK, C. E., 1883; M. S., 1902, Iowa.

Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium, 1890.

529 Brown St. (201 Science Hall)

FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Colgate.

Professor of Latin, 1895.

315 S. Dodge St. (111 Liberal Arts)

CARL EMIL SEASHORE, B. A., 1891, Gustavus Adolphus; Ph. D., 1895, Yale.

Professor of Psychology, 1897.

204 Fairchild St. (211 Liberal Arts)

HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.

Professor of Entomology, and Assistant Curator of the Museum of Natural History, 1894.

911 Iowa Ave. (303 Science Hall)

FRANK ALONZO WILDER, B. A., 1892, Oberlin; Ph. D., 1902, Chicago.

Professor of Petrology, Economic Geology and Mining, 1903.

603 N. Dubuque St. (106 Science Hall)

HARRY GRANT PLUM, B. Ph., 1894; M. A., 1896, Iowa.

Professor of European History, 1900.

(315 Liberal Arts)

CHARLES SCOTT MAGOWAN, C. E., 1884; M. A., 1887, Iowa.

Professor of Municipal and Sanitary Engineering, 1886.

304 Summit St. (Engineering Hall)

ARTHUR GEORGE SMITH, B. Ph., 1891; M. A., 1895, Iowa.

Professor of Physics and Mechanics, 1893.

West Side. (Hall of Physics)

JOHN THOMAS MCCLINTOCK, B. A., 1894, Parsons; M. D. 1898, Iowa.

Professor of Physiology in the Colleges of Medicine, 1897. (Physiological Laboratory)

WILLIAM ROLLA PATTERSON, B. Di., 1888; B. S., 1889, Iowa State Normal; B. Ph., 1895, Iowa; Ph. D., 1898, Pennsylvania.

Professor of Commerce and Statistics in the Department of Political Economy and Sociology, 1898.

505 Washington St. (209 Liberal Arts)

HENRY ALBERT, B. S., 1900; M. S., 1902; M. D., 1902, Iowa.

Professor of Pathology and Bacteriology, 1901.

620 Bowery St. (Laboratory Hall)

HENRY JAMES PRENTISS, M. E., 1889, Stevens Institute of Technology; M. D., 1898, Bellevue Hospital Medical College.

Professor of Anatomy and Histology, 1904

West Side. (Hall of Anatomy)

WILLIAM GALT RAYMOND, C. E., 1884; LL. D., 1905, Washington University.

Professor of Civil Engineering and Dean of the College of Applied Science, 1904.

606 S. Johnson St. (Hall of Engineering)

GEORGE T. FLOM, B. L., 1893, Wisconsin; M. A., 1894, Vanderbilt; Ph. D., 1899 Columbia.

Professor of Scandinavian Languages and Literatures, and Acting Professor of English Philology, 1900.

609 Summit St. (10 Liberal Arts)

ARTHUR HILLYER FORD, B. S., 1895; E. E., 1896, University of Wisconsin.

Professor and Head of the Department of Electrical Engineering, 1905.

2 Bloom Terrace (Electrical Engineering Hall)

KARL EUGEN GUTHE, Ph. D., 1892, Marburg.

Professor and Head of the Department of Physics, 1905.

707 N. Dubuque St. (Hall of Physics)

ERNEST LINWOOD OHLE, B. S., 1902; M. E., 1905, Case School of Applied Science.

Acting Professor of Steam Engineering in Charge of the Department of Mechanical Engineering, 1905.

230 Fairchild St. (Hall of Engineering)

FOREST CHESTER ENSIGN, B. Ph., 1897; M. A., 1900, Iowa.

Acting Professor in Education and Inspector of High Schools, 1905.

311 Ronalds St. (216 Liberal Arts)

FREDERICK BERNARD STURM, B. A., 1892, Michigan.

Assistant Professor of German, 1892. (102 Liberal Arts)

CLARENCE WILLIS EASTMAN, B. S., 1894, Worcester Polytechnic; M. A., Ph. D., 1898, Leipzig.

Assistant Professor of German, 1898.

226 Fairchild St. (102 Liberal Arts)

†**STEPHEN HAYES BUSH**, B. A., 1901; M. A., 1902, Harvard.

Assistant Professor in French, 1901. (120 Liberal Arts)

†Absent in residence at Harvard.

HERBERT CLIFFORD DORCAS, B. PH., 1895, Iowa; M. A., 1903, Columbia.

Assistant Professor of Education, University Examiner, and Registrar, 1895. 429 Ronalds St. (108 Old Capitol)

CARL LEOPOLD VON ENDE, B. S., 1893, M. S., 1894, Iowa; PH. D., 1899, Goettingen.

Assistant Professor in Chemistry, 1899. (Chem. Lab'y)

WILLIAM J. KARSLAKE, B. S., 1891; M. S., 1894, Lafayette; PH. D., 1895, Johns Hopkins.

Assistant Professor in Chemistry, 1904. 935 Iowa Ave. (Chemical Laboratory)

JAMES BURT MINER, B. S., 1897; LL. B., 1899; M. S., 1901, Minnesota; PH. D., 1903, Columbia.

Assistant Professor in Philosophy, 1904. 430 N. Gilbert St. (215 Liberal Arts)

HENRY LE DAUM, B. A., 1896; M. A., 1903, Ohio Wesleyan University; B. A., 1897, Harvard.

Assistant Professor in Charge of the Department of French Language and Literature, 1905. 411 S. Dubuque St. (119 Liberal Arts)

FREDERICK GOODSON HIGBEE, B. S., 1903, Case School of Applied Science.

Assistant Professor and Head of the Department of Descriptive Geometry and Drawing, 1905. 230 Fairchild St. (Hall of Engineering)

ALDEN ROBBINS HOOVER, B. S., 1902; M. D., 1905, Iowa.

Acting Assistant Professor of Histology and Embryology, 1901. (Laboratory Building)

JOSEPH JASPER McCONNELL, B. A., 1876; B. DL., 1878; M. A. 1880, Iowa; LL. D., 1904, Coe College.

Lecturer on Education, 1891. Cedar Rapids, Iowa

LUTHER ALBERTUS BREWER, B. A., 1883; M. A., 1886, Pennsylvania College.

Lecturer on Journalism, 1900. Cedar Rapids, Iowa

DUREN JAMES HENDERSON WARD, B. A., 1878; S. T. B., 1884, Hillsdale College; M. A., 1883, Harvard; PH. D., 1887, Leipzig.

Lecturer in Anthropology, 1905. 228 N. Clinton St. (221 Liberal Arts)

CHARLES F. LORENZ, B. S., 1897; M. S., 1898, Iowa.

Instructor in Physics, 1900. West Side. (Hall of Physics)

SAM BEEKLEY SLOAN, B. A., 1899, Nebraska.

Instructor in English, 1899. 606 N. Linn St. (118 Liberal Arts)

FRANK EDWARD HORACK, B. PH., 1897; M. A., 1899, Iowa; PH. D., 1902, Pennsylvania.

Instructor in Political Science, 1902. (317 Liberal Arts)

BYRON JAMES LAMBERT, B. DL., 1896; M. DL., 1897, Iowa State Normal; B. PH., 1900; B. S. in C. E., 1901, Iowa.

Instructor in Civil Engineering, 1902. (Engineering Hall)

PERCIVAL HUNT, M. DL., 1897, Iowa State Normal; B. A. 1900; M. A., 1904, Iowa.

Instructor in English, 1900. (226 Liberal Arts)

ANFIN EGDAHL, B. S., 1900, Wisconsin; M. D., 1904, Johns Hopkins Medical School.

Instructor in Pathology and Bacteriology, 1904.

509 Jefferson St. (General Laboratory)

CHARLES LAZARUS BRYDEN, E. M., 1902; B. S. in Chemistry, 1904, Lafayette College.

Instructor in Mining and Metallurgy, 1904.

(Chemical Laboratory)

EDWARD LEWIS DODD, B. A., 1897; M. A., 1901, Western Reserve University; M. A., 1902; PH. D., 1904, Yale.

Instructor in Mathematics, 1904.

526 N. Linn St. (115 Liberal Arts)

EDWIN FORD PIPER, B. A., 1897; M. A., 1900, Nebraska State University.

Instructor in English, 1905.

506 N. Linn St. (7 Liberal Arts)

HUGO WILHELM KOEHLER, B. A., 1903, Syracuse University.

Instructor in German, 1905.

514 N. Linn St. (Liberal Arts)

FRANK ALBERT STROMSTEN, B. S., 1900; M. S., 1902, Iowa; D. Sc., 1905, Princeton.

Instructor in Zoology, 1905.

118 E. Court St. (104 Science Hall)

RICHARD PHILIP BAKER, B. Sc., 1887, University of London.

Instructor in Mathematics, 1905.

1004 E. College St. (115 Liberal Arts)

CLARENCE MANLY THORNE, B. S., 1899, Northwestern University.

Instructor in Mathematics, 1905.

122 N. Capitol St. (115 Liberal Arts)

FREDERICK WILLIAM BAILEY, B. S., 1901; M. S., 1904; M. D. 1905, Iowa.

Instructor in Ophthalmology, 1901. (University Hospital)

LEWIS HENRY HANEY, B. A., 1903; M. A., 1904, Tuck School, Dartmouth College.

Acting Instructor in Commerce and Statistics, 1906.

MARY SLEIGHT EVARTS.

Assistant Instructor in Public Speaking and Acting Dean
of Women, 1901. N. Linn St. (117 Liberal Arts)

**MARY GROVE CHAWNER, B. A., 1896, Penn College; M. A.,
1902, Iowa.**

Assistant Instructor in English, 1902.
4 E. Jefferson St. (226 Liberal Arts)

RUDOLPH ERNST KLEINSORGE, B. S., 1904, Iowa.

Assistant Instructor in Physiology, 1903.

HERTHA LOUISE VOSS, B. PH., 1904, Iowa.

Assistant Instructor in French, 1904.
20 E. Market St. (6 Liberal Arts)

**CHARLES DELOS POORE, Anal. Chem., 1905, University of
Minnesota.**

Assistant Instructor in Chemistry, 1905.

JOHN JOSEPH LAMBERT, B. PH., 1899; M. S., 1901, Iowa.

Assistant Instructor in Histology and Embryology, 1898.
120 E. Market St. (Laboratory Hall)

**CLARENCE WYCLIFFE WASSAM, B. PH., 1903; M. A., 1904,
Iowa.**

Assistant Instructor in Political Economy and Sociology,
1903. 220 N. Dubuque St. (205 Liberal Arts)

**ROE EUGENE REMINGTON, B. A., 1905, University of Col-
orado.**

Assistant Instructor in Chemistry, 1905.
122 N. Capitol St. (Chemical Building)

**ARNOLD VAN COUTHEN PICCARDT HUIZINGA, B. D., 1904, Yale;
M. A., 1905, Princeton.**

Assistant Instructor in French, 1905.
215 Bloomington St. (6 Liberal Arts)

FRED ALBERT, JR., B. PH., 1903; M. S., 1905, Iowa.

Fellow in Internal Medicine, 1903.

HUGH STRAIGHT BUFFUM, B. A., 1901; M. A., 1902, Iowa.

Fellow in Education, 1904.

**SAMUEL WILLIAMSON COLLETT, B. S., 1886; M. S., 1894,
Moore's Hill College.**

Fellow in Botany, 1905.

**CHARLES HOWARD EDMONDSON, B. PH., 1903; M. S., 1904,
Iowa.**

Fellow in Zoology, 1905.

HARRY HOLLAND FITCH, B. A., 1902, Iowa.

Fellow in Latin, 1904.

EDMUND CHRISTIAN NELSON, B. PH., 1904; M. A., 1905, Iowa.

Fellow in History, 1905.

DON SEAVEY RATHBUN, B. S., 1904, Cornell College.

Fellow in Political Economy, 1905.

DANIEL STARCH, B. A., 1903, Charles City College; M. A., 1904, Iowa.

Fellow in Philosophy, 1903.

CHRISTIAN EMIL BALE, B. A., 1904, Luther College.

Scholar in English, 1904.

PAUL FREDERICK EDINGER, B. A., 1905, Iowa.

Scholar in Geology, 1905.

MABEL EVELYN ELLERBROEK, B. PH., 1905, Morningside College.

Scholar in German, 1905.

EMERY NELSON FERRISS, B. PH., 1904, Western College; M. A., 1905, Iowa.

Scholar in German, 1905.

GEORGE WOODWARD GEARHART, B. A., 1905, Parsons College.

Scholar in Political Economy and Sociology, 1905.

MARY KATHRINA HEARD, PH. C., 1892, University of Michigan; B. PH., 1905; M. D., 1905, Iowa.

Scholar in Ophthalmology and Otology, 1905.

HARRY MORGAN IVINS, B. S., 1904, Iowa.

Scholar in Animal Biology, 1905.

JAMES ASA MARMON, B. A., 1903, Simpson College.

Scholar in English, 1905.

DAVID JAMES McDONALD, B. A., 1905, Western College.

Scholar in Education, 1905.

ARTHUR C. McLANE, B. PH., 1904, Iowa.

Scholar in Anthropology, 1905.

JOHN CARL PARISH, B. PH., 1905, Iowa.

Scholar in Political Science, 1905.

ALICE RIGBY, B. PH., 1902, Cornell College.

Scholar in English, 1904.

BERTHA SUNIER, B. A., 1905, Iowa.

Scholar in French, 1905.

ARTHUR LAWRIE TATUM, B. S., 1905, Penn College.

Scholar in Chemistry

DAVID DUKE TODD, B. S., 1905, Coe College.
Scholar in Chemistry, 1905.

CHARLES DAVID WOOD, B. S., 1905, Penn College.
Scholar in Physics.

**THE ADMINISTRATIVE COUNCIL OF THE GRADUATE
COLLEGE**

**Dean WELD, Chairman; Professor FAIRBANKS, Secre-
tary; Professors ANSLEY, BIERRING, NUTTING, ROCKWOOD,
WILCOX, WILSON.**

THE ADMINISTRATION OF THE GRADUATE COLLEGE

The excellent opportunities offered by the State University of Iowa for the pursuit of advanced studies in various branches of knowledge have from the first attracted considerable numbers of college graduates to the institution. As the opportunities for advanced study multiplied, the number of such students became larger and several of the departments found it expedient to offer courses specially designed for graduates.

The first step toward the development of a graduate college was taken in 1888, when the practice of conferring the degree of Master of Arts upon all bachelors of three years' standing who had been engaged in professional or literary work was definitely discontinued. In 1893 the graduate work of the University had become of such importance as to warrant the appointment of a standing committee for its supervision and for the definition of the terms upon which the degrees of Master of Arts and Master of Science might be conferred. The policy inaugurated by this committee differed but little from that in operation at the present time and its effect was immediate and salutary. The number of advanced courses open to graduates steadily increased and the facilities for successfully prosecuting special work were greatly improved.

In 1898 applications for admission to candidacy for the degree of Doctor of Philosophy were for the first time accepted and then only from graduate students in residence at the University. The question of accepting non-resident candidates for the degrees of Master of Arts and Master of Science was disposed of in 1899 when, upon the recommendation of the standing committee on graduate students, it was voted by the faculty that no candidate *in absentia* would be accepted after October 1, 1900, and that all such existing candidacies should lapse in June, 1903.

The Graduate College was instituted by action of the board of regents on June 7, 1900. Besides recognizing the college and appointing a dean, the board established certain

fellowships and scholarships, the number of which has been increased from year to year. The first annual announcement was issued in August, 1900.

A council of seven members, appointed by the president of the University, co-operates with the dean in the administration of the college.

ADMISSION

Any person known to be a graduate in good standing of an accredited college of liberal arts will be admitted to the Graduate College. Admission to specific courses of study to be taken in candidacy for an advanced degree, however, can only be granted upon the recommendation of the respective professors in charge of such courses.

Tuition is free in the Graduate College. All students entering this college, who have not previously paid the matriculation fee of ten dollars, however, are required to pay said fee, excepting those to whom graduate scholarships or fellowships have been awarded. A diploma fee of \$10 is charged for each advanced degree conferred.

FELLOWSHIPS AND SCHOLARSHIPS

For the coming academic year there will be available about twenty-five fellowships and scholarships in the Graduate College of the State University of Iowa.

Attention is called to the scholarships in Iowa colleges offered each academic year. The regulations governing these scholarships are given below.

The value of a fellowship is \$225 per year and that of a scholarship \$125, with exemption from all university fees in each case. In general, a fellowship is granted only to graduate students of at least one year's standing, while a scholarship may be conferred upon graduation. Graduates of any accredited college of liberal arts are eligible.

FELLOWSHIPS AND SCHOLARSHIPS AT LARGE

Applications for graduate appointments must be made to the president of the University upon blanks prepared for the purpose and obtainable from any member of the faculty. All applications, to be acted upon at the spring meeting of the board of regents, must be submitted before March 15th; those to be acted upon at the June meeting, before May 15th.

The following regulations are in force:

1. Each fellow or scholar will be required to pursue his studies under the direction of the professor in charge of his major or minor courses and to render to the University such services as may be required of him by the president in consultation with the professor in charge of his major course; it being understood that the maximum amount of service to be expected of a scholar shall be the *equivalent* of teaching three hours or of superintending laboratory work for six hours per week, while that required of a fellow may not exceed twice the above amount.

2. Each student holding a fellowship or a scholarship shall be in actual attendance throughout the academic year for which he is appointed, unless excused by the president and the head of his department.

3. The applicant for a fellowship or a scholarship will be expected to demonstrate his capacity for original research and must give evidence of marked attainments in one or more lines of study. Testimonials from responsible persons as to the general worthiness of the candidate must accompany the application, but no appointment to a fellowship may be made upon recommendations not supported by specimens of the applicant's original work.

4. Each application for a fellowship or scholarship shall, if approved by the head of the department in which the appointment is sought, be referred by him to the council of the Graduate College. The council shall consider all applications thus approved and referred and submit a report to the graduate faculty recommending a list of appointments assigned to the several departments as equitably as may be, the relative qualifications of the several applicants having been accorded due weight. This report as amended by the faculty shall, upon the approval of the president, be transmitted to the board of regents or its executive committee for final action at the spring meeting.

A second assignment of fellowships and scholarships may be made in the same manner at the June meeting of the board.

5. All graduate appointments shall be for one year. Both fellows and scholars may be recommended for re-ap-

pointment at the discretion of the council, but for a second year only.

6. Any graduate appointment may be withdrawn at any time upon the concurrent recommendation of the president of the University and the head of the department in which the appointment is held.

SCHOLARSHIPS IN IOWA COLLEGES

At the meeting of the board of regents of January 7th and 8th, 1904, the following regulations with respect to scholarships in Iowa colleges were formally adopted:

1. Until further notice one scholarship in the Graduate College of this University is hereby established in each of the "standard colleges" of Iowa. For the year 1904-5 those institutions officially recognized by the college section of the Iowa State Teachers' Association will be regarded as standard colleges.

(Subsequent action of the Board of Regents has specified a list of sixteen colleges in which these scholarships are now established.)

2. Said scholarships shall entitle the student while holding the same to an annual stipend of one hundred and twenty-five dollars (\$125.00), besides free tuition, in the Graduate College.

3. Said scholarships are to be awarded annually as follows: The faculty of each college entitled to such scholarship shall be asked to certify, through its president, on or before March 15th of each year, to the president of this University, the name of two or more students who have received the baccalaureate degree from said college within two years prior to that date, or who will receive the said degree from that college at the close of that collegiate year, as being the persons whom they nominate as candidates for said scholarship in this University for the ensuing scholastic year. Of the candidates thus nominated it is contemplated that at least one shall desire to pursue, and shall have shown marked fitness for graduate work under the faculty of science; and one, likewise, under the faculty of letters.

4. Upon receipt of such nominations this University shall award the scholarship for said college to one of the

candidates thus recommended, to be held during the ensuing academic year, provided any one of the candidates meets all the conditions governing the appointment of scholars by this University (see above). The University reserves the right to provide against the undue overcrowding of any one department or group of departments by such scholars. In case any college fails to nominate candidates who meet such requirements within the time above indicated or in case the appointment fails of acceptance, this University may consider applications from other graduates of said college for the vacancy thus created or, at its discretion, withdraw the scholarship for that year.

5. Appointments to these scholarships are for one year and may be renewed for a second year only. The first award under these regulations shall be made for the academic year 1904-5.

6. The parties to whom these scholarships are awarded shall, while receiving the benefits therefrom, remain in residence in this University, shall perform such services in the libraries and laboratories and upon the instructional staff as may be assigned to them, and shall be subject to all other regulations governing fellows and scholars in the Graduate College.

7. In case any student while holding such scholarship fails to remain in residence and pursue his studies the whole of the scholastic year, then he shall receive only a proportional part of the stipend attached to such scholarship for said year.

ADVANCED DEGREES

The Graduate College confers the following degrees: Master of Arts, Master of Science, and Doctor of Philosophy. The requirements for these degrees are fully explained below.

MASTER OF ARTS AND MASTER OF SCIENCE

The degree of Master of Arts, or of Master of Science, will be conferred upon resident graduates under the following conditions:

1. The candidate must be a graduate of this University, or of an accredited university or college.

2. He must have pursued, during one or more years, a course of graduate study at this University, covering one

major and one minor subject; in a two year course, one major and two minors being allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned and to be subject to the approval of the faculty.

3. In all cases the minor or minors must be closely allied to the major subject; provided, however, that any candidate in residence for two or more years may select a modern language as a second minor in his course.

4. The candidate must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the faculty for approval not later than the second Friday of December, and the thesis itself must be presented to the examining committee at a date to be set by the professor in charge of the thesis work, but not later, in any case, than May of the year in which the degree is expected.

5. He must, at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the faculty for this purpose.

6. Any person holding a baccalaureate degree from this or another institution of acceptable grade may be registered in the Graduate College as a candidate for an advanced degree while pursuing studies in any of the professional colleges of the University; but two years of such candidacy shall be necessary to fulfill the requirement of one year's residence, the time to be reckoned from the date of application for the advanced degree.

7. The degree of Master of Arts will be granted only upon the completion of a course mainly literary in character; the degree of Master of Science, after one mainly scientific.

MASTER OF SCIENCE IN MEDICINE

Students who, upon admission to the University, have presented preparatory work equivalent to the full requirement of the College of Liberal Arts and who have completed the four years course in medicine, may, upon the recommendation of the faculty of the College of Medicine, be admitted to the Graduate College as candidates for the

degree of Master of Science in Medicine. Such students will be expected to select their major and minor subjects under the advice of the medical faculty. The terms upon which the degree will be granted are identical with those set forth above.

DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy will be granted under the following conditions:

I. *Prerequisites.*

1. The candidate must have received the bachelor's degree either from this institution or from some other of equal rank.

2. He must present evidence of having completed a satisfactory amount of undergraduate work in the subjects proposed for investigation for this degree.

3. He must possess a knowledge of French and German at least sufficient for purposes of research.

II. *Conditions of Candidacy.*

1. At least three years of graduate study will ordinarily be required. Of these, two must be in residence and the last year prior to receiving this degree must be spent at this University.

2. In making formal application for this degree the candidate shall select one major study and one or two minors. The minor study or studies shall be closely allied to the major and shall be such as, with it, to constitute a single field of research.

3. The application of the candidate setting forth the line of research proposed, shall be approved and endorsed by the professor or professors under whose direction it is proposed to prosecute the work.

III. *Dissertation.*

1. On completion of his work the candidate shall submit to the faculty a formal dissertation which shall not only exhibit evidence of original research, but shall in itself be a contribution to the sum of human knowledge.

2. The dissertation must be in acceptable literary form; although its acceptance will depend chiefly upon the subject matter.

3. The subject of the proposed dissertation must be submitted to the faculty not later than the last Friday in September of the year preceding that in which the degree is expected; and a copy of the dissertation, printed or typewritten, must be in the hands of the secretary of the faculty not later than the 20th day of May of the year in which the degree is expected. In case the dissertation offered is accepted by the faculty and the candidate passes satisfactorily the examination provided for in the next section following, he shall, prior to receiving his degree, deposit with the librarian of the University twenty-five printed copies of the dissertation so accepted.

IV. Examinations.

At such times as may be agreed upon by the candidate and the professors in charge of his work, he shall pass an examination, both oral and written; the examination to be conducted by the professors immediately concerned,—the written privately, the oral in the presence of the faculty. For purposes of this examination five members of the faculty of the Graduate College shall constitute a quorum.

ADVANCED DEGREES IN APPLIED SCIENCE

Students in the College of Applied Science receive upon graduation the degree of Bachelor of Science. Such graduates may become candidates for the advanced degrees conferred by the Graduate College upon the same terms and subject to the same regulations as graduates of the College of Liberal Arts. Advanced courses in engineering subjects will, whenever possible, be arranged as called for, even when such are not already offered.

Professional degrees, such as Civil Engineer, Electrical Engineer, Mechanical Engineer, Engineer of Mines, etc., are granted to graduates of the College of Applied Science after four years of professional work, one of which must have been in responsible charge, and one of which may have been graduate work, in residence at the University. The candidate for a professional degree in engineering must be twenty-five years of age, and application for such degree should be made to the dean of the College of Applied Science.

COURSES OF STUDY FOR GRADUATES

It is the aim of the University to furnish facilities for advanced study commensurate with the demand. No set courses of study leading to any of the advanced degrees are provided; each candidate for one of these degrees pursuing an independent line of study, in which regular university courses are usually combined with special research work, original in character, laid out with the advice of the professors, and carried out under their direction.

The elastic nature of the elective system here in operation renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The seminaries, for example, hold out encouragement and opportunities for a great deal of original study and research, as do also a number of the advanced courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In most cases courses intended primarily for graduates (C) are distinguished from those open also to undergraduates (B). To the former, undergraduates are admitted only under exceptional circumstances and subject to the discretion of the professor in charge of the work.

The courses intended only for undergraduates (A) are not here given, but may be found in the current announcement of the College of Liberal Arts. The numbers assigned to the graduate courses in any department are continuous with those designating the undergraduate courses.

Additional graduate courses will be arranged in connection with the summer session for the benefit of those unable to do work in residence during the regular academic year. Details as to these courses are given in the current announcement of the summer session or may be obtained by correspondence with the professors concerned.

SANSKRIT**PROFESSOR POTTER**

The courses in Sanskrit are intended to afford a general introduction to Indo-European comparative grammar and to lay the foundation for future reading in the literature and philosophy of the ancient Hindus.

The courses offered in Sanskrit are described on page 115.

GREEK LANGUAGE AND LITERATURE**PROFESSOR FAIRBANKS; PROFESSOR CALL**

Ordinarily candidates for advanced degrees are expected to have completed four years of work in Greek before undertaking the work of the graduate courses. The aim of these courses is to enlarge the student's view of the field in which he is working, to train him in correct methods of study and investigation, and to encourage him to pursue lines of original research. In connection with each course the student is urged to read Greek authors both widely and accurately. In the preparation of the thesis offered for an advanced degree he has the benefit of the constant direction and advice of his instructor.

In the new hall of liberal arts the departments of Greek and Latin have received ample accommodation. In addition to the regular recitation rooms, a well-lighted room is set apart as a working room for advanced students in the classics.

Not only the texts of classic authors, but also the more important annotated editions have been obtained, the sets

of periodicals containing the results of philological and archeological investigations are being placed on the shelves, and in some lines of archeology the standard publications have already been secured. The University has also begun a collection of photographs and lantern slides which are used to illustrate the courses in archeology, and to some extent the courses in Greek literature. The collection owned by the University is supplemented by several hundred slides and many photographs belonging to the instructors in this department.

Graduates who offer Greek as their major are not required to take Latin as a minor, but they are strongly urged to do so. A working knowledge of Latin, as well as of French and German, is, of course, required of candidates for the doctor's degree.

The courses offered in Greek Language and Literature are described on pages 122-124.

CLASSICAL ARCHEOLOGY

ART; HISTORY; ANTIQUITIES

The courses offered in Classical Archeology are described on pages 120-121.

LATIN LANGUAGE AND LITERATURE

PROFESSOR CURBIER; PROFESSOR POTTER, PROFESSOR FAIRBANKS, MR. FITCH, MISS PRENTISS

The minimum prerequisite for work leading to an advanced degree is the full preparatory work and the undergraduate courses 7-12 inclusive, or their equivalent.

The courses offered in Latin Language and Literature are described on pages 116-120.

FRENCH LANGUAGE AND LITERATURE

**ASSISTANT PROFESSOR LE DAUM; ASSISTANT PROFESSOR
BUSH, MISS VOSS, MR. HUIZINGA, MISS SUNIER**

Aside from the general requirements for admission to the Graduate College, the candidate for an advanced degree pursuing either his major or his minor course in this department, must have completed undergraduate courses 1 (2), or 3 (4), and 5 (6), or their equivalent; that is, he is expected to know the essentials of French grammar, to be able to read modern French prose, and to translate English into French with fair ability.

Besides the completion of courses offered below, the candidate must, if romance is chosen as a major, follow a course of original study, the subject of which is chosen under the advice of the professor in charge, the results of which must be embodied in a thesis.

The courses offered in French, Spanish, and Italian are described on pages 124-129.

GERMAN LANGUAGE AND LITERATURE

**PROFESSOR WILSON; ASSISTANT PROFESSORS STUBM AND EAST-
MAN, MR. KOEHLER, AND MR. FERRISS**

All courses in German are offered every year except as otherwise indicated. Courses with odd numbers are given in the first semester, those with even numbers in the second semester. Students are invited to consult with the instructors in arranging their work. Graduate students of German will find it to their special advantage to combine with their work some of the courses offered in the Scandinavian and English departments.

The courses offered in German Language and Literature are described on pages 129-133.

SCANDINAVIAN LANGUAGES AND LITERATURE

PROFESSOR FLOM

The courses offered in Scandinavian Languages and Literature are described on pages 133-137.

ENGLISH

PROFESSOR ANSLEY; DR. FLOM, MR. PIPER, MR. SLOAN, MR. HUNT, MISS CHAWNER

Undergraduates who intend to become candidates for advanced degrees in English should emphasize this and related subjects in the work of the junior and senior years. Those who do not make the special preparation recommended find that more than the usual time must be given to the graduate course.

The requirements for a major in either English literature or English language may be learned by application to the head of the department. The preparation and the aims of the student are considered. For a minor in English, courses should be chosen after conference with the head of the department and the professor in charge of the major. With the consent of the instructor, any course in the department is open to a graduate student; but only approved combinations of courses lead to advanced degrees.

Work not provided for in the courses announced is outlined and directed by instructors as needed.

The courses offered in English are described on pages 138-142.

PUBLIC SPEAKING

PROFESSOR GORDON; MISS EVERTS

The subject of public speaking deserves careful attention at the hands of graduate students. The relation between the history of a nation and the development of public speaking, the history of public speaking in a republic, and the influence of vocal expression upon a nation's literature are some of the subjects that need elucidation at the hands of cultured students.

The courses offered in Public Speaking are described on pages 142-145.

HISTORY

PROFESSOR WILCOX; PROFESSOR PLUM

Students who wish to do graduate work in history will be expected to have done more than the average amount of undergraduate work in the subject. Graduate work is not intended to fill up gaps left in the student's undergraduate courses. All who intend to specialize in history should emphasize this subject before taking the bachelor's degree. Before anyone can be enrolled as a graduate student in this department the requisite amount of preliminary work must be completed, either before or after receiving the first degree. Those contemplating graduate work in history are urged to elect also courses in sociology, economics, and politics.

The courses offered in History are described on pages 146-149.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH; DR. HORACK

Candidates for the degree of Master of Arts or Doctor of Philosophy in any of the lines of study comprehended by the department of political science are offered the following regular courses of instruction. Additional courses in the general field of politics will be outlined by the head of the department to meet the special demand of individual candidates.

The courses offered in Political Science are described on pages 149-153.

POLITICAL ECONOMY AND SOCIOLOGY

PROFESSOR LOOS; PROFESSOR PATTERSON, DR. WARD, MR. WASSAM

Candidates for advanced degrees who elect political economy, sociology or commerce as major or minor are re-

requested to confer with the professors in charge with reference to the suitable grouping of the courses here offered.

The courses offered in Political Economy and Sociology are described on pages 153-159.

PHILOSOPHY

PROFESSOR SEASHORE; PROFESSOR ———, PROFESSOR FAIRBANKS, MR. STARCH

This department offers opportunity for advanced study in the following subjects; psychology, history of philosophy, logic and metaphysics, ethics, aesthetics, and the history and philosophy of religion. Candidates for the degree of Master of Arts or Master of Science having the required preparation for advanced work may elect any one of these subjects for either a major or a minor course, subject to the rules for graduate students. Candidates for the degree of Doctor of Philosophy, while selecting one subject for special research will be expected to gain a comprehensive knowledge of all the subjects in this group. As examples of subjects for special research, or for theses, may be mentioned: problems in experimental or physiological psychology, the methods and results of child study, epistemology, special periods and subjects in the history of philosophy, etc.

Candidates for advanced degrees in this department should have taken as undergraduate work in this institution, or in another of like rank, a general elementary course in psychology, a course in logic and a course in ethics. An introductory course in the history of philosophy is also very desirable for preparation. Graduate students not candidates for a degree may take any course for which they are prepared, upon the approval of the instructor.

The courses offered in Philosophy are described on pages 159-163.

EDUCATION

**PROFESSOR BOLTON; ACTING PROFESSOR ENSIGN, ASSISTANT
PROFESSOR DORCAS, SUPERINTENDENT McCONNELL**

*The courses offered in Education are described on pages
163-168.*

ZOOLOGY

**PROFESSOR NUTTING; PROFESSOR HOUSER, PROFESSOR WICK-
HAM, DR. STROMSTEN, MR. ANDERSON, MR.
EDMONDSON, MR. IVINS**

Two years' work in natural science, one of which shall have been in zoology or animal morphology, will be required as a preliminary to admission to graduate courses with zoology as a major.

One year's work in zoology, animal morphology, or botany will be required for admission to graduate courses with zoology as a minor.

*The courses offered in Zoology are described on pages
168-173.*

HUMAN PHYSIOLOGY

DR. McCLINTOCK; MR. KLEINSORGE

Those wishing to take physiology either as a major or minor in a course leading to an advanced degree, should have, as preliminary, at least one year's work each in physics, chemistry, and morphology, and should have completed undergraduate courses in physiology. Suitable courses will be outlined to meet the requirements of each student and special arrangements will be made in the physiological laboratory of the College of Medicine which will enable the students to carry on original research work.

Throughout the year; hours to be arranged.

HISTOLOGY AND EMBRYOLOGY

DR. PRENTISS

As a prerequisite to advanced work in this department the student will be required to possess a good working knowledge of both the methods and the subject matter of general histology and embryology. Two courses are offered as follows:

1. **THE EYE**—The histology of its tissues, considered in relation to both their phylogenetic and their ontogenetic development. The structure and development of the retina will be specially studied. Time to be arranged.

2. **THE EAR**—The investigation will proceed along the same lines as in the preceding course. Time to be arranged.

In either course the student will be assigned a private laboratory and offered such opportunities as the general laboratory and library afford. The department will supply the necessary tissues and reagents.

OPHTHALMOLOGY, OTOTOLOGY, RHINOLOGY AND
LARYNGOLOGY

PROFESSOR DEAN; DR. BAILEY

This department offers work suitable to candidates for advanced degrees. Its laboratories are well equipped with microscopes, microtomes and other instruments of investigation, and are amply provided with anatomical, histological and pathological materials. The graduate student will be given a desk in the laboratory and will have access to all available instruments and materials. He may also take advantage of the departmental clinics. His work will be personally supervised. Subjects for special research and for theses will be suggested by the head of the department as required. Time to be arranged. Professor DEAN.

BOTANY

PROFESSOR MACBRIDE; PROFESSOR SHIMEK

General courses in elementary botany, including the courses in plant histology and physiology are required as preliminary to graduate work in this department.

The courses offered in Botany are described on pages 174-179.

PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL

Candidates for higher degrees may pursue advanced work or carry on original investigations in pathology or bacteriology. As a prerequisite to such work, the student will be required to have had at least one year's work in pathology or bacteriology.

Each student will be assigned a private laboratory and given the use of a good microscope, and supplied with the tissues and reagents necessary for the work of the course.

The following regulations with respect to major and minor subjects are to be observed. When the major subject chosen is bacteriology, the minor subject should include either chemistry, or botany, or both; while, if the major is experimental or comparative pathology, the minor should comprise such subjects as anatomy, histology, animal morphology, physiology, botany or psychology. Work in this department may also be elected as a minor.

Special courses may be arranged to suit the requirements of individual students.

For a description of the graduate courses offered in Pathology and Bacteriology see courses 8 and 9 on pages 273-274.

THEORY OF MEDICINE

DR. BIERRING

INTERNAL MEDICINE—Candidates for advanced academic degrees may pursue research work in internal medicine in

the laboratories of the College of Medicine. The department now has a fully equipped clinical laboratory which affords special facilities for the study of problems connected with internal diseases. When this subject is chosen as a major, it is suggested that the minor include either physiology, pathology, or bacteriology.

Throughout the year; hours to be arranged.

GEOLOGY

PROFESSOR CALVIN; PROFESSOR WILDER, MR. BRYDEN

The geological field within reach of Iowa City and the geological collections and reference library belonging to the University afford ample opportunities for research work in geology. Courses can be arranged to meet the wishes of individual students. The following are outlines of some of the courses which may be chosen from the possible range of subjects available for graduate work.

The courses offered in Geology are described on pages 179-183.

CHEMISTRY

PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE, ASSISTANT PROFESSOR KARSLAKE, MR. BRYDEN

Graduates of accredited colleges who have done the undergraduate work, comprising general elementary chemistry with laboratory work, introductory qualitative analysis, and introductory quantitative analysis, may become candidates for the degree of master of science.

The requirements for admission to the courses leading to the doctor's degree demand three years' preparatory work in chemistry and comprise a good knowledge of the following branches: general chemistry, physical chemistry, qualitative analysis, quantitative analysis, organic chemistry (including some experience in organic combustion and organic preparations) and outlines of chemical technology. A thorough course in physics is very desirable as a preparation for either of the advanced courses; and if, in any case,

deficiencies exist in this respect they must be made up after entering, and a corresponding increase in the duration of course is to be expected. No one will be encouraged to present himself for final examination without a certain maturity of thought and ability which does not depend altogether upon the time of study.

The courses offered in Chemistry are described on pages 183-190.

PHYSICS

PROFESSOR GUTHE, PROFESSOR SMITH, MR. LORENZ, MR. —, MR. WOOD

Those wishing to take physics as a minor should previously have pursued a course equivalent to the undergraduate courses 3 and 4 in general physics and should also have a good working knowledge of algebra, geometry, trigonometry, and, if possible, of plane analytical geometry. For those taking physics as a major, two years' work in physics, a knowledge of differential and integral calculus is necessary, and, in some cases, differential equations will be needed.

The courses offered in Physics are described on pages 191-193.

MATHEMATICS

PROFESSOR WELD; DR. DODD, MR. BAKER, MR. THORNE, MR. ———.

The candidate for an advanced degree in mathematics must have completed one of the groups of undergraduate courses, (A), (B), (C), or (D), detailed statements of which will be found on page 193.

Graduates electing mathematics as a minor may, upon the recommendation of the professor in charge of the major subject, elect the second year's work in any one of the first three of the above groups.

Many of the courses outlined below may be taken by undergraduates specializing in mathematics. All graduate

students in mathematics are expected to take an active part in the mathematical seminary; and every candidate for an advanced degree will be required to submit a thesis, prepared under the direction of his instructors, representing original investigation in either pure or applied mathematics.

The courses offered in Mathematics are described on pages 192-199.

ELECTRICAL ENGINEERING

PROFESSOR FORD

As a foundation for the following graduate courses the student should have a good knowledge of physics and calculus.

For a description of the courses offered in Electrical Engineering see courses 53 (54), 55 (56), 62a, 64b, page 321.

**THE SCHOOL OF POLITICAL
AND SOCIAL SCIENCE**

* FACULTY AND INSTRUCTORS

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D., 1877, Yale; PH. D., 1883, Leipzig; LL. D.,
1895, Williams.

President, 1898.† 608 College St. (108 Old Capitol)

AMOS NOYES CURRIER, B. A., 1856; M. A., 1859, Dartmouth;
LL. D., 1893, Des Moines.

Professor and Head of the Department of Latin Language
and Literature, and Dean of the College of Liberal Arts,
1867. 32 Bloomington St. (108 Liberal Arts)

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B.
D., 1881, Yale; D. C. L., 1898, Penn College.

Professor and Head of the Department of Political Economy
and Sociology and Director of the School of Political and
Social Science, 1889.
22 E. Bloomington St. (205 Liberal Arts)

WILLIAM CRAIG WILCOX, B. A., 1888; M. A., 1891, University
of Rochester.

Head of the Department of History, and Professor of Amer-
ican History, 1894.
629 N. Dubuque St. (222 Liberal Arts)

BENJAMIN FRANKLIN SHAMBAUGH, B. PH., 1892; M. A., 1893;
Iowa; PH. D., 1895, Pennsylvania.

Professor and Head of the Department of Political Science,
1895. 219 N. Clinton St. (202 Liberal Arts)

FREDERICK ELMER BOLTON, B. S., 1893; M. S., 1896, Wiscon-
sin; PH. D., 1898, Clark.

Professor and Head of the Department of Education, 1900.
1019 College St. (217 Liberal Arts)

CARL EMIL SEASHORE, B. A., 1891, Gustavus Adolphus; PH.
D., 1895, Yale.

Professor of Psychology, 1897.
204 Fairchild St. (211 Liberal Arts)

*The faculty of the College of Liberal Arts has over ninety professors, instructors and assistants. This list contains the names only of those in the several departments of the University offering prescribed courses in this school.

† Date following title indicates year of appointment to service in the University. The names are arranged in groups according to seniority of appointment to present rank.

HARRY GRANT PLUM, B. PH., 1894; M. A., 1896, Iowa.

Professor of European History, 1900.

222 Fairchild St. (315 Liberal Arts)

WILLIAM ROLLA PATTERSON, B. DL., 1888; B. S., 1889, Iowa State Normal; B. PH., 1895, Iowa; PH. D., 1898, Pennsylvania.

Professor of Commerce and Statistics, 1898.

505 Washington St. (209 Liberal Arts)

JAMES BURT MINER, B. S. 1897; LL. B., 1899; M. S., 1901, Minnesota; PH. D., 1903, Columbia.

Assistant Professor in the Department of Philosophy, 1904.

430 N. Gilbert St. (215 Liberal Arts)

FRANK EDWARD HORACK, B. PH., 1897; M. A., 1899, Iowa; PH. D., 1902, Pennsylvania.

Instructor in Political Science, 1902.

(220 Liberal Arts)

LEWIS HENRY HANEY, B. A., 1903; M. A., 1904, Tuck School, Dartmouth College.

Acting Instructor in Commerce and Statistics, 1906.

CLARENCE W. WASSAM, B. PH., 1903, M. A., 1904, Iowa.

Assistant Instructor in Economics, 1903.

220 N. Dubuque St. (205 Liberal Arts)

EDMUND CHRISTIAN NELSON, B. PH., 1904, Iowa.

Fellow in History, 1904. 205 N. Linn St. (315 Liberal Arts)

DON SEAVEY RATHBUN, B. S., 1904, Cornell College.

Fellow in Political Economy, 1905.

GEORGE WOODWARD GEARHART, B. A., 1905, Parsons College.

Scholar in Political Economy and Sociology, 1905.

SCOPE AND PURPOSES OF THE SCHOOL

The School of Political and Social Science, established by the board of regents in June, 1900, embraces the following departments of instruction: history, political economy and sociology, including commerce; and political science. It provides courses in ancient and modern history, in the several branches of economics including commerce, finance and statistics; in theoretical and practical sociology; and in political science including public law and jurisprudence.

The aim of the school is to give a complete general view of all the political and social sciences and to foster the further development of all the branches thereof. Its more immediate and practical object is to prepare the students of the University for the intelligent exercise of the rights and duties of citizenship in a free commonwealth, and to fit them for the various branches of the public service and for the wider avenues of business. It aims furthermore to supplement, by courses in public law and comparative jurisprudence, the instruction in private municipal law given by the faculty of law, and to give to those who intend to make journalism their profession adequate training in historical, economic and legal subjects. Finally it aims to educate teachers of the several branches of political and social science.

ADMISSION TO UNDERGRADUATE STUDY

The requirements for admission to undergraduate study in the School of Political and Social Science are the same as those of the College of Liberal Arts and are to be found on pages 84-99.

GENERAL AND SPECIAL COURSES IN THE SCHOOL OF POLITICAL AND SOCIAL SCIENCE

For a description of these courses see pages 101-105.

SPECIAL UNDERGRADUATE AND GRADUATE COURSES

As the courses here outlined are based on the group principle of election, modifications may be readily made in order to bring them more specifically within the scope of the aims and purpose of the individual student. Extreme specialization is, however, not recommended and for his guidance the special student should always consult the general course of study given above. The special attention of those contemplating preparation for certain lines of trade or for certain forms of the public service, for example, the consular service, is called to the importance of an adequate knowledge of modern languages. The University at present offers: German, French, Spanish, Italian, Dutch, and Scandinavian. In preparation for statistics the election of one or more courses in mathematics in the freshman and sophomore years should not be omitted. As preparation for modern history the freshman option in history and additional history, in the sophomore year may be taken. And in the course in practical philanthropy, psychology may be taken as an elective during the sophomore year. The student who wishes to specialize in the School of Political and Social Science, should in each semester of his sophomore year elect at least two of the courses open to him in history, politics and economics.

The special courses during the first and second years are substantially like the work outlined for the general course during the first two years. The courses as outlined for the third and fourth years are primarily designed for juniors and seniors who may wish to specialize in the several lines indicated, but they are also recommended to graduate and professional students.

STUDIES IN SOCIOLOGY, ECONOMICS, POLITICS AND HISTORY

The faculty of political and social science are the editors of a series of studies in sociology, economics, politics and history, of which the following have so far appeared:

Vol 1, Studies in the Politics of Aristotle, and the Republic of Plato, by ISAAC ALTHAUS LOOS, The University Press, 1899; Vol. 2, No. 1, The Early History of Banking in Iowa, by FRED D. MERRITT, M. A., Ph. D., 1900; Vol. 2, No. 2, The Development of Political Thought in Japan. by KIYOSHI KAWAKAMI, 1903; Vol. 3, No. 1, The Freedmen's Bureau, by PAUL SKEELS PEIRCE, 1904.

THE POLITICAL SCIENCE CLUB

The Political Science Club is devoted to the cultivation and advancement of the political and social sciences. The club has held regular meetings since October, 1896. A formal organization was effected in January, 1897. The club now holds fortnightly sessions from October to May each year. At these sessions papers are read by members or by invited guests, presenting the results of original investigation in some subject in any one of the following group of sciences: history, economics, sociology, politics, law, education and ethics. The membership of the club is limited to the faculties of instruction in the several departments interested.

THE SUMMER SESSION

JUNE 18—JULY 28, 1906

THE SUMMER SESSION

FACULTY AND INSTRUCTORS

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D. 1877, Yale; PH. D., 1883, Leipzig; LL. D.,
1895, Williams.

President, 1899.* 603 College St. (108 Old Capitol)

SAMUEL CALVIN, M. A., 1874, Cornell College; PH. D., 1888,
Lenox; LL. D., 1904, Cornell College; F. G. S. A.
Professor and Head of the Department of Geology, 1874.
522 N. Clinton St. (108 Science Hall)

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Mon-
mouth; PH. D., 1895, Lenox.
Professor and Head of the Department of Botany, 1878.
728 Washington St. (206 Science Hall)

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell
University.
Professor and Head of the Department of German Language
and Literature, 1888. 311 N. Capitol St. (101 Liberal Arts)

LAENAS GIFFORD WELD, B. S. 1883; M. A. 1885, Iowa.
Professor and Head of the Department of Mathematics and
Dean of the Graduate College, 1886.
612 N. Dubuque St. (113 Liberal Arts)

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B.
D., 1881, Yale; D. C. L., 1898, Penn Coll.
Professor and Head of the Department of Political Economy
and Sociology, and Director of the School of Political and
Social Science, 1889.
11 E. Bloomington St. (205 Liberal Arts)

ELBERT WILLIAM ROCKWOOD, B. S., 1884, Amherst; M. D.,
1895, Iowa; PH. D., 1904, Yale.
Professor and Head of the Department of Chemistry, 1888.
1011 Woodlawn. (Chemical Laboratory)

*Date following title indicates year of appointment to
service in the University. The names are arranged in groups
according to seniority of appointment to present rank.

BENJAMIN FRANKLIN SHAMBAUGH, B. Ph., 1892; M. A., 1893, Iowa; Ph. D., 1895, Pennsylvania.

Professor and Head of the Department of Political Science,
1895. 219 N. Clinton St. (202 Liberal Arts)

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor and Head of the Department of English, 1889.
1641 Woodlawn. (227 Liberal Arts)

HENRY EVARTS GORDON, B. A., 1879; M. A. 1901, Amherst.

Professor of Public Speaking, 1900.
303 N. Capitol St. (312 Liberal Arts)

FREDERICK ELMER BOLTON, B. S., 1893; M. S., 1896, Wisconsin; Ph. D., 1898, Clark.

Professor and Head of the Department of Education;
Director of the Summer Session, 1900.
1019 College St. (217 Liberal Arts)

BOHUMIL SHIMEK, C. E., 1883; M. S. 1902, Iowa.

Professor of Physiological Botany; Professor of Botany in
the College of Pharmacy, and Curator of the Herbarium,
1890. 529 Brown St. (201 Science Hall)

FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Colgate.
Professor of Latin, 1895.

527 N. Linn St. (111 Liberal Arts)

KARL E. GUTHE, Ph. D., 1892, Marburg, Germany.

Professor and Head of the Department of Physics, 1905.

GEORGE TRUMBULL LADD, B. A., Western Reserve, 1864; D.
D., Andover, 1879; LL. D., Western Reserve,
1895, Princeton, 1896; Professor Emeritus, Yale.

Professor of Philosophy in the Summer Session, 1906.

RICHARD GAUSE BOONE, M. A., DePauw, 1883; Ph. D., Uni-
versity of Ohio, 1889; (Editor of Education; Ex-
President of Michigan Normal College; Ex-Su-
perintendent of Schools, Cincinnati.)

Professor of Education in the Summer Session, 1906.

FRED MORROW FLING, B. A., 1883, Bowdoin; Ph. D., 1890,
Leipzig. (Professor of European History, Uni-
versity of Nebraska.)

Professor of History in the Summer Session, 1906.

JOSEPH B. PIKE, B. A., 1890; M. A., 1892, University of Min-
nesota. (Professor of Latin in the University of
Minnesota.)

Professor of Latin in the Summer Session, 1906.

HENRY LE DAUM, B. A., 1898; M. A., 1903, Ohio Wesleyan
University; B. A., 1897, Harvard.

Assistant Professor in Charge of French Language and
Literature, 1905.

W. N. CLIFFORD, B. S., 1898, Des Moines College, Superintendent of Schools, Council Bluffs, Iowa.

Special Lecturer in Education in the Summer Session, 1906.

HUGO WILHELM KOEHLER, B. A., 1903, Syracuse.

Instructor in German, 1905.

FRED G. BAENDER.

Superintendent of Engineering Shops, 1905.

SAMUEL WILLIAMSON COLLETT, B. S., 1886; M. S., 1894, Moore's Hill College.

Instructor in Botany in the Summer Session, 1906.

JOHN GABEERT BOWMAN, B. A., 1899; M. A., 1904, Iowa.

Instructor in English in the Summer Session, 1906.

CHARLES D. WOOD, B. S., Penn College, 1905.

Assistant in Physics in the Summer Session, 1906.

ADIN NOYES BROWN, PH. G., 1903, Iowa.

Assistant Instructor in Chemistry, 1905.

For the Faculty of the *Summer School of Library Training* see page 282 of this announcement.

Other instructors, demonstrators, assistants, or readers may be named later. Provisions may also be made for additional subjects. The privilege of modifying the present announcement to meet unforeseen exigencies is reserved. Not many changes are at all likely to occur.

THE SUMMER SESSION COMMITTEE

Professor BOLTON, chairman; Professor SHIMEK, secretary; Professors WILCOX, CALVIN, POTTER.

THE SUMMER SESSION

GROWTH

In the six years of the maintenance of the Summer Session the attendance has nearly trebled in numbers, and each year there has been an increasing number of advanced students to take advantage of the opportunities offered for uninterrupted study along special lines. During the last session seventy-five graduate students were in attendance. Each year also a greater number of high school teachers and city superintendents have taken advantage of the opportunities offered.

FOR WHOM DESIGNED

The Summer Session is an integral part of the regular university work, being the first term of the scholastic year. New students can enter at this time as well as at the beginning of either semester. The courses are so arranged as to supplement those offered during the rest of the year, and hence new or old students find no difficulty in classifying and securing work adapted to their needs. The experience of previous sessions has demonstrated the value of the work for the following classes of students:

1. *Superintendents and principals* who desire to continue academic and professional work and come in touch with recent advances in education.
2. *High school teachers* who wish to study special subject matter or educational theory.
3. *Elementary and grammar school teachers.* Many courses, especially those in literature, education, psychology, ethics, history, politics, nature study, physiology, and sociology, will be of exceeding value to the teachers below the high school as well as those in the high schools. Success in the elementary school depends as much upon breadth of culture as upon technique and primary methods.

4. *Candidates for state certificates* will find an opportunity to strengthen themselves on most of the subjects included in the state examinations.

5. *Regular students of the University* who desire to shorten the time of their course may do so by attending the summer sessions. Many students throughout the country by this means graduate in three years.

6. *Normal school graduates* and others desiring to ultimately take a degree will find it to their advantage to attend.

7. *Graduate students* will find ample opportunity in all departments to pursue work advantageously.

8. Graduates of three-year high schools and of four-year high schools.

9. Persons who desire training in library work.

FACILITIES

All the resources of the University are placed at the disposal of the Summer Session. All the laboratories and libraries in the departments of letters and science will be open, and every department will offer work of a grade equal to that given during the rest of the year. In most cases the heads of the departments will give instruction.

No other institution in the state offers full college work in all departments during the summer session.

No other institution in the state offers such abundant opportunities for graduate study and advanced research, either during the year or during the summer. The State University maintains the only graduate college in the state.

The summer school for library training is the only one maintained in the north-central states west of the Mississippi.

ADMISSION

1. No entrance examinations are required for admission to the summer session. Any person may be enrolled who is deemed able to profit by the work given.

2. Students should have maturity and training equivalent to that represented by the completion of a high school course. Many teachers who have not completed a high

school course, but who have had considerable experience in teaching and who have maturity of mind may profit by some of the courses offered.

3. Opportunities will be offered to secure elementary university courses in Latin, German, French, English, history, political economy, civics, physiographic geology, physiology, physics, chemistry, education, psychology, public speaking, algebra, and geometry.

4. Graduates of the smaller high schools which have less than four years of work will find work in English, foreign languages, and mathematics especially suited to their needs. Some of the work in other departments may also be selected.

5. New students generally enter the University in September or in February at the beginning of the second semester. However, there are many advantages in beginning work in the summer session, not only to the student who needs to strengthen his preparation, but also to the student who is thoroughly equipped. In a general way it is advantageous to any student to begin work in the summer session. In this way he may become familiar with the University and its methods of instruction before the heavier work of the year begins. Because the classes are smaller in the summer session, he may also receive more personal attention. Students may thus become thoroughly in touch with the University before the regular work of the year opens. Questions concerning courses to be pursued and all questions concerning entrance may be adjusted easier during the summer than when there is a rush of students in the fall. Then, by the opening of the regular semester, the student is ready for work in a deliberate manner. It is absolutely necessary for those who expect to shorten their course materially to take work in the summer sessions.

Students of the smaller high schools who expect to attend during the year, are especially urged to be in attendance at the summer session. By this means they may arrange better for the regular work of the year and thus reduce the time required for making up conditions.

ADMISSION TO REGULAR STANDING IN THE UNIVERSITY

The scope and spirit of the work of the State Univer-

sity must, of necessity, be determined by the following statutory provisions:

It (the University) shall include a collegiate, law, and such other departments, with such courses of instruction and elective studies, as the board of regents may determine, beginning the same in its collegiate department, so far as practicable, at the points where the same are completed in high schools; and no one shall be admitted who has not completed the elementary studies in such branches as are taught in the common schools throughout the state. Section 2640, Code of Iowa.

In accordance with the above, and, happily, in accordance with the practice of leading American universities, the State University of Iowa has fixed its requirements for admission to first year (freshmen) standing in the college of liberal arts and in the college of medicine at the equivalent of four years' work of high school grade. In Iowa there are about 180 high schools which satisfactorily maintain four year courses of study and which thereby hold places on the accredited list of the University. Upon the presentation of proper certificates, graduates of these schools are received without examination and without conditions into the first year classes of the several colleges of the State University. Besides these fully accredited high schools there are many whose facilities do not enable them to maintain satisfactorily the four year course, but in which a part of the work of such a course can be well done, and such schools are similarly accredited so far as they are known to conform to the recognized high school standards.

In view of the recent advance in its entrance requirements, the university authorities have extended the range of conditional admission for graduates from three year high school courses or other inadequate preparatory courses. Such graduates may pass directly to the University and complete in residence the requirements for admission to first year (freshman) standing. There are courses in English, in ancient and modern languages, in history, in science, and in mathematics, which are open to students thus admitted, but the University offers only such courses as may afford university credit to students fully prepared for

admission. Other deficiencies in preparation may be made up outside the University. Opportunities are afforded by local preparatory schools and by approved tutors.

Graduates of three year high schools may enter the colleges of law, pharmacy, and homeopathic medicine without conditions. For the present students who have completed two years of high school work will be admitted to the College of Pharmacy without conditions. In all colleges degrees are conferred only after the completion of all required preparatory and collegiate work. Thus candidates for degrees in the College of Liberal Arts must earn the 30 credits required for full freshman standing in addition to earning the regular 120 university credits required of all graduates of this college.

UNIVERSITY CREDIT.

1. Credit will be given for all work satisfactorily completed when the student has complied with the regular entrance requirements as stated in the annual announcements.

2. Credit will be given on the same basis as for the regular work of the year. That is, a course of one hour a week during the summer session will equal one-third of a semester hour; a course of two hours a week will equal two-thirds of a semester hour, etc.

3. Students desiring credit may not take more than twenty hours of work per week.

4. The maximum amount of credit which may be earned during a summer session is six and two-thirds semester hours.

PROJECTED REGISTRATION.

By special permission of the faculty experienced teachers who have been in regular attendance during the summer session, and who are regularly matriculated in the University, may continue their work at home during the year. By this means they may reduce the residence requirements for graduation. The amount of work allowed in non-residence will be determined for each case separately.

Several superintendents and teachers are now carrying on work advantageously by this plan.

GENERAL LECTURES AND ROUND TABLE MEETINGS

Every summer a series of public lectures, many of them illustrated, has been provided without expense to the students of the summer session. Arrangements are under way to offer an especially attractive programme by members of the faculty, eminent superintendents and others. A definite programme of the lectures to be given will be announced at the opening of the session.

The general assembly and chapel exercises will be held every Wednesday at 9:45 A. M. in the general assembly room, hall of liberal arts.

Round table meetings for the discussion of various topics of interest to educators will be organized by those in attendance upon the session, as circumstances may suggest.

There will probably be opportunity to listen to addresses by prominent educators from other institutions.

Several departments offer teachers' courses in addition to the regular academic work.

SPECIAL COURSES.

ENGLISH—In view of the increased interest in better English teaching in the public schools, and hoping to enable Iowa schools to continue in the lead in this advanced movement, a special effort has been made to provide courses that will be especially helpful to teachers of English in the high school and in the grades. Work in literature of special value to teachers and librarians, and also a thorough course in composition will be offered.

PHYSIOGRAPHY—The teachers' course in geographic geology proved so popular and helpful last year that it is offered again this year. It is designed to be of special value to teachers of physical geography in the high school. It will have distinct value for every grade teacher as well.

PUBLIC SPEAKING—Teachers who have charge of rhetorical in the high schools will find these courses of great

benefit to them in their work. Oral expression is the most useful practical application of English. Grade teachers may also find much in the courses that would have every day application.

EDUCATION (a)—THE HIGH SCHOOL—Problems of the high school are everywhere attracting attention and there is necessity for their careful consideration. The period of life covered by the high school is one of the greatest concern in the whole life of the individual and therefore demands the wisest possible guidance. The interest in the course on the high school last year more than warrants its repetition.

SCHOOL SUPERVISION (b)—Dr. Richard G. Boone, the well known author and lecturer, who was for some years superintendent of schools in Cincinnati, Ohio, will give a course on school supervision. Dr. Boone was for several years professor of pedagogy in the University of Indiana and later president of the State Normal College, Ypsilanti, Michigan. He is now the editor of "Education."

Superintendent W. N. Clifford of Council Bluffs, who has gained such an enviable reputation for his work in objective geography, will also give five lectures on school supervision and five on geography work in the schools. This last work will be richly illustrated by objective material and with stereopticon views.

PHILOSOPHY—Dr. George Trumbull Ladd, Professor Emeritus of Yale, has been secured to give two courses in philosophy. This will afford a rare opportunity for Iowa students, long familiar with his books, to come in personal contact with Professor Ladd. He has traveled widely and written voluminously and will bring the fruits of rich experience. Clergymen and others desiring to register for Dr. Ladd's courses only, will be allowed to make such arrangements.

BOTANICAL EXCURSION—A botanical excursion to the Yosemite Valley, California, will be made under the direction of Professors Macbride and Shimek, provided twenty students register for this work. Nearly enough have already made arrangements for the trip. This excursion is a new departure and will give an unusual opportunity to

botany students for field work of the highest value. Students desiring to go should communicate at once with Professor Macbride. For the announcement of the work in botany at the University, see outline for Botany in the following pages.

MANUAL TRAINING—For the first time work is offered in manual training. This will include mechanical drawing, woodwork and turning, pattern making, forging, etc. This subject is becoming recognized as an important branch in all our public schools and it is the design of the University to offer a thoroughly practical course to teachers of Iowa.

STATE EXAMINATIONS.

In the special interest of those students who may wish to secure state certificates or state diplomas, the State Board of Educational Examiners will hold an examination at the University on July 26, 27, 1906.

EXPENSES.

The tuition fee for the summer session is five dollars, which covers all dues to the University. Tuition is free in the graduate college.

There are no dormitories and no commons connected with the University. Clubs may be formed, in which the cost of day board is from \$2.00 to \$2.50 per week. Room rent varies from 50 cents to \$1.50 per week for each student. Boarding and lodging in private houses can be obtained for from \$3.50 to \$5.00 per week.

Inquiries regarding rooms and board may be made of the registrar upon arrival at the University.

RAILWAY RATES.

Students should pay full fare going, taking a receipt ~~error~~. If more than one line of railway is traveled over, a receipt should be taken over each road. If the requisite number of certificates are presented to the director, the usual one-third rate will be granted for the return trip.

It is important that students secure receipts and pre-

sent them to the director, as it is only by securing one hundred certificates that the reduced rates will be granted.

REGISTRATION.

1. New students should see, first, the director of the summer session, room 217 Hall of Liberal Arts; second, the treasurer in the Old Capitol; third, the registrar in the Old Capitol.

2. Students who have been registered in the University at any previous time, either during a summer session or during a regular semester should go first to the treasurer and second to the registrar. Those already registered in the graduate college go at once to the registrar.

Office hours of the President of the University, 11 A. M. to 12:15 P. M.

Office hours of the Director of the Summer Session, 11 to 12 M. and 2:00 to 2:30 P. M. daily.

Any further information desired may be obtained by addressing President George E. MacLean, or Professor Frederick E. Bolton, Director of the Summer Session, Iowa City, Iowa.

SUMMER SESSION IN MEDICINE.

A graduate summer session in the College of Medicine with courses running from three to five weeks will open on June 4, 1906. Physicians and others interested may receive circulars giving full information upon application to President George E. Mac Lean, Iowa City, Iowa.

OUTLINE OF THE PLAN OF INSTRUCTION

The courses afforded in the several departments represented in the Summer Session are here outlined. Those desiring more detailed information should communicate directly with the professors concerned.

LATIN.

PROFESSOR POTTER; PROFESSOR PIKE.

I. CAESAR, SELECTIONS FROM THE CIVIL WAR—A reading course, with drill in syntax and forms, for students who have had two or more years of Latin. This course may be taken for college credit or to make up preparatory deficiencies in Caesar, or Cicero. Professor POTTER.

Daily at 7:00.

II. SELECTIONS FROM VERGIL'S AENEID, BOOKS VII-XII—A reading course for freshmen. This can be taken for college credit or to make up deficiencies in Vergil. Professor PIKE.

Daily at 11:00.

III. CICEO'S LETTERS—A reading course for advanced students. Abbott's edition will be used. Professor PIKE.

Daily at 9:00.

IV. LATIN COMPOSITION—Advanced course. Professor PIKE.

Daily at 10:00.

V. TEACHERS' COURSE—Aims and methods. Special attention will be given to the first two years of Latin. Text-books, pronunciation, prosody, syntax of the moods and tenses. A model class taken from the Iowa City high school serves to illustrate the methods. Professor POTTER.

Daily at 8:00.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON; MR. KOEHLER

I. GERMAN STORY—Riehl's Burg Neideck. Applicants for this course must have studied German at least one year. Conducted in German and English. Professor WILSON.

Daily at 8:00.

II. GERMAN POETRY—An attempt will be made to show the beauties of some of the best and most characteristic German lyrics and ballads. Von Klenze's Deutsche Gedichte. Professor WILSON.

Daily at 9:00.

III. GERMAN LIFE—A course of lectures in German on German life, institutions, and customs. There are occasional discussions of the topics treated in the lectures. The course thus affords incidentally an opportunity for practice in conversation. The lectures are popular rather than scientific. This course may be taken to advantage in connection with course IV. Mr. KOEHLER.

Monday, Wednesday, Friday at 10:00.

IV. GERMAN COMPOSITION—Designed to give practice in composition and niceties of idiom and special drill in pronunciation. Conducted in German and English. This course may be taken to advantage in connection with course III. Mr. KOEHLER.

Tuesday, Thursday, at 10:00.

V. ELEMENTARY GERMAN—Designed for beginners and students who wish to review elementary German. Bierwirth's Beginning German. Mr. KOEHLER.

Daily at 9:00.

VI. SPECIAL GERMAN—The exact amount of credit will be determined by the character and the amount of work done by each individual student, but the student must register for the maximum amount of credit sought. Arrangement on consultation. Professor WILSON and Mr. KOEHLER.

By appointment, 8:00 to 11:00.

FRENCH.

ASSISTANT PROFESSOR LE DAUM.

I. A FIRST COURSE IN FRENCH—Translation, composition, correct pronunciation, and some grammar.

Daily at 10:00.

II. TEACHERS' COURSE—Methods and work in first, second and third year French.

Monday, Wednesday, Friday, at 11:00.

III. COMPOSITION COURSE; with pronunciation.

Tuesday, Thursday, at 11:00.

IV. FRENCH INSTITUTIONS—Talks on French and the French people; open to all summer session students.

Saturday at 10:00.

NOTE—Texts in all French courses will be announced when needed by the students.

ENGLISH.

PROFESSOR ANSLEY; MR. BOWMAN.

I. CHAUCER—The pronunciation of Middle English is studied and practiced and the structure of the language is considered with the object of attaining the ability to read readily in the literature of Chaucer's time. The Prologue and other selections are read in class. Professor ANSLEY.

Daily, at 8:00.

II. CRITICISM—Some principles of literary art applied in criticism of modern prose and verse. Professor ANSLEY.

Daily, at 9:00.

III. COMPOSITION—Practice in the construction of effective English prose, with observation of the principles involved. Lectures, criticism of written exercises, and studies in the work of representative modern writers. Mr. BOWMAN.

Daily, at 10:00.

IV. POETICS—Studies in the forms of English verse. Mr. BOWMAN.

Daily, at 11:00.

PUBLIC SPEAKING.**PROFESSOR GORDON.**

I. **THE ART OF PUBLIC SPEAKING**—This is an elementary course, covering preparatory work fundamental to literary interpretation, oratory and debate.

Daily, at 10:00.

II. **EXTEMPORE SPEAKING**—This is a practical course in speaking, seeking to develop the best forms in platform work both as to content and delivery.

Monday, Wednesday, Friday, at 9:00.

III. **LITERARY INTERPRETATION**—This is a study of lyric, epic, dramatic and oratoric forms with reference to their vocal expression.

Tuesday, Thursday, at 9:00.

The three above courses are open to any student regardless of previous preparation and study in the subject of public speaking.

HISTORY.**PROFESSOR FLING.**

I. **EUROPE IN THE NINETEENTH CENTURY**—The course deals with the history of continental Europe from 1815 to 1871. It consists of lectures, discussions, source studies, and library readings.

Daily, at 8:00.

II. **THE FRENCH REVOLUTION**—A study of the movement in France that led to the establishment of a constitutional government. Lectures, discussions, source studies and readings.

Daily, at 9:00.

III. **METHODS OF HISTORICAL RESEARCH**—A course of six lectures presenting in elementary form the process followed by the investigator in his effort to restore the past of man in society that we call history. The definition of history, the relation of the historical to the natural sciences, the choice of a subject, the search for material, historical sources, criticism of the sources and the establishment of the historical fact, synthesis and exposition will be dis-

cussed. The course will be especially helpful to students and teachers of history, of sociology and of philosophy. It is open to the public, but credit will be given to registered students who complete the required reading.

Saturday, at 9:00.

IV. SEMINARY FOR ADVANCED STUDENTS—If there is demand for it, a seminary dealing with some topic from the French revolution will be given for the benefit of advanced students. Some knowledge of research work and ability to use French will be required. Students desirous of taking such work are requested to correspond with Professor Fling.

Saturday, at 8:00.

ECONOMICS.

PROFESSOR LOOS.

I. THE FOUNDATIONS OF MODERN INDUSTRY—The primitive economy; the village community and manor; arts and crafts—town life; commerce; national economy; machine production.

Daily at 8:00.

II. CONTEMPORARY SOCIAL LEGISLATION—The labor movement; socialism; the new individualism and the civic spirit; the monopoly problem.

Daily at 11:00.

POLITICAL SCIENCE.

PROFESSOR SHAMBAUGH.

I. IOWA HISTORY AND POLITICS—Lectures on the political and constitutional history of Iowa. An attempt will be made to make this course especially helpful to those who are interested in the teaching of civics in the public schools. Some attention will be given to the methods of teaching civics.

Daily, at 7:00.

II. MODERN EUROPEAN GOVERNMENTS—A comparative study of the leading governments of modern Europe including the Government of England, the Government of Switzerland, the Government of France, the Government of Germany, and the Government of Belgium.

Daily, at 9:00.

PHILOSOPHY AND PSYCHOLOGY.

PROFESSOR LADD; MR. STARCH.

I. INTRODUCTION TO PSYCHOLOGY—A brief survey of the entire field of psychology, especially adapted for teachers who can take only a short course. The lectures will be accompanied by demonstrations with apparatus and other illustrative material from the psychological laboratory, and by supplementary reading. The course serves as an introduction to all other courses in the department of philosophy. Mr. STARCH.

Daily, at 8:00.

II. INTRODUCTION TO PHILOSOPHY—An elementary study of fundamental philosophical questions with some reference to historical relations. Designed for students who wish to make a brief study of the great problems of philosophy and their significance in other fields of thought. Lectures, required reading, and recitations. Mr. STARCH.

Not offered in 1906.

III. ETHICS—An elementary course on the psychology of conduct and the moral judgment, the development of conduct and ethical theories, the standards of morality, duties, virtues, and the moral life of the individual and society. Professor LADD.

Daily, at 9:00.

IV. LABORATORY COURSE IN PSYCHOLOGY—A series of selected experiments so arranged as to familiarize the students with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological studies and especially to furnish training in accurate observation and interpretation of mental processes. May be taken with or in sequence to course I. Three laboratory periods and two lectures a week. Mr. STARCH.

Daily. Laboratory, Monday, Wednesday, Friday, 1:30 to 3:30.

Lectures, Tuesday, Thursday, at 1:30.

V. RESEARCH IN PSYCHOLOGY—Original investigation of special problems in psychology. Advanced individual work in the laboratory for graduate students. In this course

special attention may be given to preparation for the experimental study of school children. Professor SEASHORE.

Not offered in 1906.

VI. PHILOSOPHY OF RELIGION—An elementary course introduced by a brief outline of the problems of philosophy and their solutions. A systematic outline of the philosophy of religion, based upon history and psychology of religion and harmonized with the explanation of nature, mind and knowledge. Professor LADD.

Daily, at 4:30.

NOTE—Professor Ladd's courses are intended to be general culture rather than technical courses. While they are elementary, they furnish an extraordinary opportunity for all mature students to hear one of the greatest authors and teachers of philosophy.

EDUCATION.

PROFESSOR BOLTON; DR. BOONE, SUPERINTENDENT CLIFFORD.

I. EDUCATIONAL THEORY—A discussion of, (1) the nature of education both descriptively and by definition; (2) the scientific aspects of education; (3) the data of an educational science; and (4) a study of the contributing sciences. The order will be that followed in the instructor's text book, the "Science of Education." The method will involve not only lectures and discussions, but the preparation of papers and reports as time permits. Dr. BOONE.

Daily, at 11:00.

II. SCHOOL SUPERVISION AND THE SCHOOL AS A SOCIAL INSTITUTION—A consideration of the education (training) furnished by the social institutions, the family, church, society, the state, occupations, etc., and the function of the school, as supplanting these; the teacher, the course of study, equipments, teaching machinery, and results; problems of school organization, supervision of systems, visitation of classes, teachers' meetings, relation to school boards, etc. The problems of this course will be concrete, and the discussion elementary, and may be taken in conjunction with course I. on Educational Theory without conflict. Dr. BOONE.

Daily at 2:30.

III. THE CHILD, THE ADOLESCENT, AND THE HIGH SCHOOL—(1) A brief consideration of the scope and methods of child study. (2) The special phenomena and characteristics of adolescent life. (3) A study of the high school in the light of the consideration of adolescence. (4) Educational values of high school courses of study, relations of the high school to the elementary school, the college and to life. Special consideration will be given to Iowa problems. Professor BOLTON.

Daily, at 3:30.

IV. GRADUATE SEMINARY.—Designed to assist graduates and other advanced students in research and investigation. A part of the time will be devoted to the consideration of technical educational literature and modern educational problems. It is possible that Hall's *Adolescence* may be read and discussed. Professor BOLTON.

Daily, hour to be determined.

V. THESIS WORK—Advanced students preparing theses or conducting original investigations will receive personal direction. Special opportunities will be offered this year. Professor BOLTON.

VI. Superintendent Clifford will give five lectures on supervision and five on objective work in geography during the last two weeks of the session. Exhibitions of materials and stereoptican views will accompany the lectures on geography.

ZOOLOGY.

PROFESSOR NUTTING; MR. ———.

I. GENERAL ZOOLOGY—This is essentially a lecture course to be illustrated by abundant material from the museum supplemented by lantern slides. It has the double purpose of furnishing a general survey of the field of zoological science for those students who have no present intention of specializing in this field, and of furnishing a bird's-eye view as an introductory course to those who intend to take further work in the department, especially in comparative, systematic and speculative zoology.

Tu., Wed., Th., Fri., throughout the session.

II. COMPARATIVE ZOOLOGY OF INVERTEBRATES—This will be a modification of the present course in systematic zoology, and will consist of laboratory work in which the various classes of invertebrate animals will be compared by the use of the exceptionally large series in the museum, their resemblances and differences pointed out, and described, and their habits and relationships studied. This work will be supplemented by lectures and illustrations by the instructors. Open to all students except freshmen. Professor NUTTING.

Mon., Tu., Wed., Th., throughout the session.

BOTANY

PROFESSOR SHIMEK; MR. ———.

I. A TEACHER'S COURSE IN PLANT ECOLOGY—Intended primarily for teachers of botany in Iowa high schools. The course consists of laboratory and field investigation of the local flora, with special reference to the conditions which determine the distribution of plants, especially in Iowa. It is essentially a study of the "botany of out-of-doors," and is intended to familiarize the teacher with illustrative material available for class use.

Directions and opportunities are also offered for the preservation of such illustrative materials for high school use.

In connection with this course one hour a week will be devoted to the discussion of certain phases of nature study.

The latter exercise is open to students of the summer session in all other courses, but without credit.

The entire course will require five hours a week.

II. COMPARATIVE MORPHOLOGY OF PLANT TYPES—This course consists of lectures and laboratory investigation of the structure and life-history of local and state types of the principal groups of plants. Two hours daily are required in the laboratory. Slime moulds, schizophytes, diatoms, algae, fungi, mosses, ferns, and flowering plants are successively taken up in the laboratory, and some attention is also given to field work.

Five hours a week.

III. SPECIAL COURSES—A limited number of special courses in advanced botanical research may be arranged for those who are prepared for such work. Time arranged to suit applicants.

Illustrated lectures will supplement all of the courses.

The extensive collections in the university herbarium, and the botanical reference library, will be available for reference.

NOTE—Courses in Botany will certainly be offered at the University though some changes may be made, such changes being dependent upon the projected expedition to Yosemite. (See page 262). In case changes are made they will be announced before the opening of the session.

GEOLOGY

PROFESSOR CALVIN.

I. GEOGRAPHIC GEOLOGY—This is a course intended to meet the needs of those who expect to teach physical geography and geology in high schools. It will include a study of the origin of the physical features of the earth, the agencies of geographical development and change, and an outline of historical geology. Large use will be made of illustrative materials, including rocks and mineral specimens, models, maps, photographs and lantern slides. Field excursions on Saturdays are included in the course.

Daily, at 10:00.

II. GEOLOGY OF IOWA—A course in the geology of Iowa is offered to students who are registered for course I, or who have previously had an amount of work in geology equivalent to course I. It is the purpose of this course to pay especial attention to the geological structure and history of our own state, the areal distribution of our geological formations, their characteristics and uses, and the conditions under which they were deposited. The economic minerals of Iowa will be considered, together with the geographical and geological positions in which they occur. The rocks, minerals and typical fossils will be illustrated by specimens selected from the geological collections of the University, and photographs and lantern slides will be

made to aid in the presentation of the subject. The publications of the Iowa Geological Survey will be used for reference, and the work of the lecture room and laboratory will be supplemented by excursions in the field.

Daily, at 8:00. The laboratory and reading room will be open daily from 8:00 to 10:00.

CHEMISTRY.

PROFESSOR ROCKWOOD; MR. BROWN.

I. **DESCRIPTIVE INORGANIC CHEMISTRY**—This is an elementary course of lectures planned for those who wish to give instruction on the subject in secondary schools. It will deal principally with the non-metallic elements, although the metals will also be considered. The fundamental principles of chemistry and the properties of the elements and their important compounds will be experimentally demonstrated.

Daily at 8:00.

II. **CHEMICAL PRACTICUM**—Opportunity will be given to perform in the laboratory experiments illustrative of the principles of inorganic chemistry. The more common chemical manipulations will be learned and also the methods of setting up apparatus. The work can be taken with the preceding course or by those who have had its equivalent. Three to five periods each week.

III. **QUALITATIVE ANALYSIS**—Such a knowledge of general chemistry as may be gained in one year of a high school course is a prerequisite. The work is for the most part done in the laboratory although lectures, demonstrations and recitations will be included. Three to five periods each week.

IV. **VOLUMETRIC ANALYSIS**—This course serves as an introduction to more difficult methods of quantitative analysis. It is mainly laboratory work; lectures will be given as are necessary. After an elucidation of the general principles the preparation of standard solutions, sources of error and practical applications will be illustrated. The same preparation is necessary as for course II. Three to five periods each week.

V. **CHEMICAL RESEARCH**—For this a knowledge of inorganic and organic chemistry including qualitative and quantitative analysis, is essential, also a reading knowledge of French and German. Subjects will be assigned to meet individual requirements. Twenty to thirty hours weekly.

PHYSICS.

PROFESSOR GUTHE; MR. WOOD.

I. **MECHANICS AND HEAT**—Lectures and recitations, accompanied by experimental demonstrations; laboratory once a week. This course covers substantially the same ground as that gone over in the general lecture course on these topics, given during the regular University session. A knowledge of trigonometry is required.

Lectures Mon., Tu., Wed., Th., at 11:00.

II. **PROBLEMS IN PHYSICS**—This course is designed to familiarize the student with the application of the principles of physics to the solution of problems. The course will be adapted to the individual needs of the students. Three times a week.

III. **LABORATORY WORK**—The work in the laboratory being entirely individual, students of various degrees of advancement can be accommodated at the same time. It is required, for admission to this course, that the candidate should have had at least a good elementary preparation in physics. Students who have had work equivalent to the first year's course in physics in the University, may obtain credit for laboratory work pursued for not less than six hours a week during the session. For teachers the work can be arranged to meet individual needs, such as gaining familiarity with particular pieces of apparatus, or carrying out special lines of experimentation.

IV. **GRADUATE WORK**—The laboratory and the departmental library will be open to graduate students under the usual conditions. Selected subjects, either of a theoretical or an experimental nature, will be assigned for critical study. A reading knowledge of French and German is desired.

MATHEMATICS AND ASTRONOMY.

PROFESSOR WELD; MR. ———.

The following courses in mathematics will be given with special reference to the needs of high school teachers. University credit may be given only for courses IV and V, and under certain circumstances course II. Courses III and IV are arranged with reference to the needs of teachers preparing to take examinations for state certificates and diplomas and of students seeking admission to the University.

The instructors will give liberally of their time and service to those wishing direction in any of the lines of study coming within the scope of the department. Special appointments will be made with individuals.

I. ALGEBRA—This will be essentially a teachers' course, both the subject matter and methods of presentation being given careful attention. The theories of the minus sign and of the exponent will be considered at the outset. The simple equation of the first degree will next be studied and geometrically interpreted, after which the quadratic equation and equation of higher degrees will be treated in a similar manner. Attention will also be given to systems of simultaneous equations. The course will include a study of imaginary expressions, and their interpretation. Professor WELD.

Mon., Wed., Fri., at 10:00.

II. PLANE GEOMETRY—The so-called *heuristic*, laboratory, and other methods of teaching geometry will be discussed and illustrated. At the same time the work will be so conducted as to enable the student to obtain a comprehensive view of the subject. This is not a beginner's course but the subject will be reviewed with special reference to the needs of those intending to take the examinations for state diplomas or for admission to the University. Mr. ———.

Mon., Wed., Fri., at 9:00.

III. SOLID GEOMETRY—Those deficient in solid geometry and who intend to enter the University in the near

future will be given an opportunity to make up this requirement for admission to full freshman standing. Mr. _____.

Tu., Th., at 9:00.

IV. TRIGONOMETRY—This course will be limited to plane trigonometry and can be taken only by those having a good knowledge of geometry and algebra. The subject will be studied with special reference to its practical applications to surveying, navigation, mensuration, etc. Credit, one semester hour. Professor WELD.

Tu., Wed., Th., Fri., at 8:00.

V. HIGHER MATHEMATICS—Courses in higher mathematics will be arranged, with only reasonable limitations, to meet the requirements of all who may present themselves for such work. Correspondence with reference to the specific lines of work desired is invited. The credit allowed will depend upon the amount and quality of work done. Special appointments will be made if necessary. Professor WELD; Mr. _____.

Mon., Wed., Fri., at 9:00, and Tu., Th., at 10:00.

VI. ASTRONOMY—If desired, a brief course in practical astronomy will be given. The instruments at the observatory will be used for the determination of time, latitude and longitude. Many of the more interesting celestial objects will be located and studied with the aid of the telescope. The subject will be further illustrated by the exhibition of the series of lantern slides belonging to the department. Time to be arranged. Professor WELD.

MANUAL TRAINING.

(Shop Work and Drawing.)

MR. BAENDER.

I. MECHANICAL DRAWING—A course especially designed for those taking shopwork. The course includes instruction in the use of tools, lettering, drawing from objects, original designs, development of surfaces, tracing and blue-printing. Drawings will be made of the various machine parts in the shops, special attention being given to the conventional methods of representing mechanical objects.

Daily, 8:00 to 10:00.

II. WOODWORK AND TURNING—A course especially arranged for teachers of woodwork. Instruction will be given in the use of the various hand tools and especial attention will be given to the design of finished products, embracing a selection of material, methods of joining, staining and finishing. The course in turning includes all the various methods of lathe work, the student being required to design and turn various objects embracing the different operations in turning.

Daily, 10:00 to 12:00.

III. PATTERN MAKING—A course intended only for those who have had Course II, or its equivalent. This course includes a study of the theory of patterns and making of various patterns illustrating the principles involved. This course will be supplemented with lectures on modern foundry practice.

Daily, 10:00 to 12:00.

IV. FORGING—A course designed to meet the needs of teachers of forging, also well adapted for blacksmith apprentices wishing to become better acquainted with the methods of forging. This course includes forging of iron and steel, welding, hardening, tempering, and annealing. Special attention will be given to forging from specifications, choice of material and working out finished product. A study will be made of the various methods of iron and steel manufacture, special stress being laid on the selection of steel to meet the requirements of various tools, with special methods of tempering them.

Daily, 1:30 to 4:30.

V. MACHINE-SHOP—A course arranged to meet the needs of teachers of shop practice—use of hammer and chisel, filing and scraping, lathe work, planer and shaper, milling and grinding. Instruction in the use of the micrometer screw for accurate measurements, cutting and grinding tapers to fit, valve grinding, tool grinding, cutting single and double square threads. A study will be made of the theory of gear teeth and the whole supplemented with general machine shop practice.

Daily, 1:30 to 4:30.

THE SUMMER SCHOOL

FOR

LIBRARY TRAINING

A DEPARTMENT OF THE SUMMER SESSION, UNDER THE AUSPICES
OF THE

IOWA LIBRARY COMMISSION

MEMBERS OF THE COMMISSION *Ex-officio*

JOHNSON BRIGHAM, *State Librarian*,
President.

JOHN F. RIGGS, *State Superintendent of Public Instruction*.
GEORGE E. MACLEAN, *President of the State University of
Iowa*.

MEMBERS OF THE COMMISSION BY APPOINTMENT

MRS. HORACE M. TOWNER, Corning.
MRS. DAVID W. NORRIS, Grinnell.
MRS. HENRY J. HOWE, Marshalltown.
CAPTAIN W. H. JOHNSTON, Ft. Dodge.

ALICE S. TYLER,
Secretary of the Commission.

THE SUMMER LIBRARY SCHOOL.

The Iowa Library Commission announces the sixth annual session of the summer school for library training to be held at the State University of Iowa, Iowa City, as a department of the summer session of the University, June 18, to July 28, 1906.

OBJECT.

This course is intended primarily, to meet the needs of the smaller public libraries in Iowa. Librarians already holding positions in the state, assistants in the larger libraries and those definitely appointed to library positions who wish to prepare for their work are given the preference in making up the class. The course is in no sense offered as a substitute for the full training of one of the regular library schools, but is given for those who feel their lack of knowledge of modern library methods and have not the time nor the means to attend a full-course school. By securing a leave of absence for six weeks, this brief systematic course will give a broader view of the work as a whole, and a knowledge of as much of the technical work of a library, as can be compressed into the six weeks of close work.

SUBJECTS.

In all cases where the subject admits, instruction will be accompanied by practice work which will be carefully revised and criticised.

The following subjects will be included in the lectures given during the course:

- Note-taking.
- Library handwriting.
- Book selection and buying.
- Trade bibliography.
- Mechanical preparation of books.
- Accessioning.
- Shelf listing.
- Classification.
- Author numbers.
- Cataloging.
- Serials.
- Loan systems.
- Statistics.
- Library work with children.
- Reference work.
- Reading lists.
- Interior arrangement of a library.
- Libraries and schools.

Library commissions and traveling libraries.

Library administration.

Binding and repair of books.

State and U. S. publications.

INSTRUCTORS.

The School will be under the direction of the Secretary of the Commission who will give lectures on general library subjects, with the needs of the Iowa libraries especially in view. Mr. Malcolm G. Wyer, librarian of the State University, is the resident director, and will have charge of the course in reference work, and the instruction will be based upon Miss Kroeger's *"Guide to the Study and Use of Reference Books."*

Miss Maud Vanburen, the head cataloger at the University library will give the instruction in accessioning and cataloging; the cataloging instruction is based on the assumption that the student has had no experience in this work and desires a general knowledge of author, title and subject entries; as much time will be given to the latter as is possible in such a brief course. Classification, book numbers, shelf list and related topics will be given ample consideration by an instructor familiar with these subjects.

Library work with children will be especially considered during the last two weeks of the session, as there is no part of the public librarian's work which is so fraught with far-reaching results, as the work with children. A study of children's literature and methods of work with the children, and the conduct of a children's room will be presented by Miss Edna Lyman, children's librarian of Oak Park (Ill.) Public Library, who is recognized as an authority on her subject.

A new course will be given for teachers and others who are in attendance at the Summer Session in other departments on the care and use of libraries from the teachers' standpoint. This course is not a technical one, as regards records and other matters of library detail, so much as it is one method of making the books of use in the school room. A discussion of the book itself, how it is made, its contents, index, etc., and how we may use it as a tool, will constitute a feature of this course. The fact that Iowa has a law which provides that libraries shall be purchased

in every school district makes it of the greatest importance that the teachers shall know how to make the books of the greatest service, both in the school room and for general reading.

The course will be given during the first four weeks of the Summer Session by Miss Irene Warren, Librarian of the School of Education, University of Chicago, who brings to this work not only thorough training and experience as a librarian, but also a knowledge of pedagogical principles gained from study and experience in connection with the School of Education. Probably three hours a week will be necessary for this course with a certain amount of reading outside the lecture period. Those who are likely to take this course should address Miss Alice Tyler, State House, Des Moines, Iowa.

Lectures will be given during the course by members of the faculty of the State University, and by the Library Commissioners. Librarians of some of our most successful libraries will visit the school and talk upon themes of especial interest.

Books are provided by the Library Commission for the practice work of the students, and the books have been selected with a view to exemplifying the instruction given in the class room. The library of the State University, consisting of about 60,000 volumes, and the public library of Iowa City, of over 9,000 volumes, are available for the uses of the students.

ENTRANCE REQUIREMENTS.

The course is intended especially for Iowa librarians who are in charge of small libraries. Those who have had some experience in library work or wish to prepare for definite positions will be given preference. Inasmuch as emphasis is laid on practice work and prompt technical revision and correction, the number admitted to the class must be limited.

Students will be admitted from other states if they meet the admission requirements and if the limit of students is not reached by Iowa applicants. Entrance examinations are not required, but candidates are supposed to have completed a high school course or its equivalent.

As the course in library work with children deals with a subject of such general interest, students will be admitted for this course whether engaged in library work or not, and those from other states will be welcomed.

Applications should be made on the blank form to be obtained of the director, Miss Alice S. Tyler, Iowa Library Commission, Des Moines, and should be sent in not later than May 14, 1906.

The following books will be used in the summer school. Those marked with an asterisk are published by the U. S. Bureau of Education, Washington, D. C., and will be sent to any address without charge and should be obtained of the Bureau at once. Others will be on sale at the school.

Dewey.	Simplified library school rules.....	\$1.25
	Decimal classification (or).....	5.00
	Abridged edition (may be used if student owns it).....	1.50
*	Papers prepared for World's Library Congress, 1893.....	Free
*Cutter	Rules for a dictionary catalogue.....	Free
	Decimal author table (two-figure).....	1.25
American	Library Association. List of subject headings	2.00
Dana.	Library primer	1.00
	A. L. A. Catalogue, 1904.....	.25
Kroeger.	Guide to the study of reference books..	1.25

Supplies for practice work may be obtained at the school, the cost of which, aside from the books, will probably not exceed \$5.00.

EXPENSES.

The tuition fee in the library school is \$10.00 for the regular course, including the course in library work with children. For this latter course alone the fee will be \$5.00.

There are no dormitories and no commons connected with the University. Clubs may be formed, in which the cost of day board is from \$2.00 to \$2.50 a week. Room rent varies from 50 cents to \$1.50 per week for each student. Boarding and lodging in private houses can be obtained for from \$3.00 to \$5.00. It is hoped that a desirable fra-

ternity house may be secured for the home of the library students while in Iowa City. Write to the Director concerning this matter.

REGISTRATION.

Students on coming to the University should present themselves at the office of the director of the summer session, hall of liberal arts, for registration.

Students are requested to register before 12 o'clock on Monday, June 18, as the class work will begin at two o'clock on that day.

Address all communications regarding the instruction to Miss Alice S. Tyler, Secretary Iowa Library Commission, Des Moines, Iowa.

**THE COLLEGE OF APPLIED
SCIENCE**

THE COLLEGE OF APPLIED SCIENCE

*FACULTY AND ASSISTANTS

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams; B. D., 1877, Yale; Ph. D., 1883, Leipzig; LL. D., 1895, Williams.

President, 1899.† 603 College St. (108 Old Capitol)

WILLIAM GALT RAYMOND, C. E., 1884; LL. D., 1905, Washington University.

Professor of Civil Engineering and Dean of the College of Applied Science, 1904.

606 S. Johnson St. (Engineering Hall)

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor and Head of the Department of English, 1899.
1041 Woodlawn. (227 Liberal Arts)

SAMUEL CALVIN, M. A., 1874; LL. D., 1904, Cornell College; Ph. D., 1888, Lenox; F. G. S. A.

Professor and Head of the Department of Geology, 1874.
522 N. Clinton St. (108 Science Hall)

ARTHUR HILLYER FORD, B. S. in E. E., 1895; E. E., 1896, Wisconsin.

Professor and Head of the Department of Electrical Engineering, 1905. 2 Bloom Terrace (Electrical Building)

KARL EUGEN GUTHE, Ph. D., 1892, Marburg.

Professor and Head of the Department of Physics, 1905.
707 N. Dubuque St. (Hall of Physics)

HENRY LE DAUM, B. A., 1896; M. A., 1903, Ohio Wesleyan University; B. A., 1897, Harvard.

Assistant Professor in Charge of the Department of French Language and Literature, 1905.

411 S. Dubuque St. (119 Liberal Arts)

* The faculty of the University numbers over one hundred and eighty professors, instructors and assistants. This list contains the names of those in the several departments of the University who are members of the faculty of the College of Applied Science.

† Date following title indicates year of appointment to service in the University. The names of professors and instructors are arranged alphabetically in groups of equal rank.

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Monmouth; PH. D., 1895, Lenox.

Professor and Head of the Department of Botany, 1878.
728 Washington St. (206 Science Hall)

CHARLES SCOTT MAGOWAN, C. E., 1884; M. A., 1887, Iowa, Professor of Municipal and Sanitary Engineering, 1886.
304 Summit St. (105-N. Engineering Hall)

ELBERT WILLIAM ROCKWOOD, B. S., 1884; M. A., 1901, Amherst; M. D., 1895, Iowa; PH. D., 1904, Yale.

Professor and Head of the Department of Chemistry and Toxicology, 1888. 1011 Woodlawn. (Chemical Laboratory)

BOHUMIL SHIMEK, C. E., 1883; M. S., 1902, Iowa.

Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium, 1890.
529 Brown St. (201 Science Hall)

ARTHUR G. SMITH, B. PH., 1891; M. A., 1895, Iowa.

Professor of Physics and Mechanics, 1893.
West Side. (Hall of Physics)

LÆNAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor and Head of the Department of Mathematics, Dean of the Graduate College, 1886.
612 N. Dubuque St. (113 Liberal Arts)

FRANK ALONZO WILDER, B. A., 1892, Oberlin; PH. D., 1902, Chicago.

Professor of Petrology, Economic Geology and Mining, 1903.
603 N. Dubuque St. (106 Science Hall)

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell University.

Professor and Head of the Department of German Language and Literature, 1888.
311 N. Capitol St. (101 Liberal Arts)

ERNEST LINWOOD OHLE, B. S. in M. E., 1902; M. E., 1905; Case School of Applied Science.

Acting Professor of Steam Engineering and Head of the Department of Mechanical Engineering, 1905.
230 Fairchild. (205-N Engineering Hall)

FREDERICK GOODSON HIGBEE, B. S., 1903, Case School of Applied Science.

Assistant Professor and Head of the Department of Drawing and Descriptive Geometry, 1905.
230 Fairchild. (4-N Engineering Hall)

CARL LEOPOLD VON ENDE, B. S., 1893; M. S., 1894, Iowa;
Ph. D., 1899, Goettingen.

Assistant Professor in Chemistry, 1899.
722 Jefferson St. (Chemical Laboratory)

WILLIAM JAY KARSLAKE, B. S., 1891; M. S., 1894, Lafayette;
Ph. D., 1895, Johns Hopkins.

Assistant Professor in Chemistry, 1904.
935 Iowa Ave. (Chemical Laboratory)

FREDERICK G. BAENDER.

Superintendent of Shops, 1905. (Engineering Shop)

RICHARD PHILIP BAKER, B. Sc., 1887, University of London.

Instructor in Mathematics, 1905.
1004 E. College St. (115 Liberal Arts)

CHARLES LAZARUS BRYDEN, E. M., 1902; B. S. in Chemistry, 1904, Lafayette College.

Instructor in Mining and Metallurgy, 1904.
610 N. Dubuque. (104-N Engineering Hall)

EDWARD LEWIS DODD, B. A., 1897; M. A., 1901, Western Reserve University; M. A., 1902; Ph. D., 1904, Yale.

Instructor in Mathematics, 1904.
526 N. Linn. (115 Liberal Arts)

BYRON JAMES LAMBERT, B. Di., 1896; M. Di., 1897, Iowa State Normal, B. Ph., 1900; B. S. in C. E. 1901, Iowa.

Instructor in Civil Engineering, 1902.
214 Church St. (204-N Engineering Hall)

CHARLES F. LORENZ, B. S., 1897; M. S., 1898, Iowa.

Instructor in Physics, 1900. West Side. (Hall of Physics)

EDWIN FORD PIPER, B. A., 1897; M. A., 1900, Nebraska State University.

Instructor in English, 1905.
506 N. Linn St. (7 Liberal Arts)

SAM BERKLEY SLOAN, B. A., 1899, Nebraska.

Instructor in English, 1899.
506 N. Linn St. (118 Liberal Arts)

CLARENCE MANLY THORNE, B. S., 1899, Northwestern University.

Instructor in Mathematics, 1905.
122 N. Capitol St. (115 Liberal Arts)

MARCIA O. DUNHAM,

Secretary to the Dean.

MEMBERS OF FACULTIES OF OTHER COLLEGES GIVING INSTRUCTION TO STUDENTS IN THE COLLEGE OF APPLIED SCIENCE

HENRY ALBERT, B. S., 1900; M. D., 1902; M. S. 1902, Iowa.
Professor of Pathology and Bacteriology, 1901.
620 Bowery St. (Laboratory Hall)

JOHN GEORGE CHALMERS, B. A., 1901, Lafayette.
Professor and Director of Physical Training and Athletics,
1903.

THE REV. ARTHUR FAIRBANKS, B. A., 1886, Dartmouth;
PH. D., 1890, Freiburg, I. B.

Professor of Greek Literature and Archeology, and Head of
the Department of Greek; Secretary of the Graduate
Faculty, 1900. 7 E. Bloomington St. (310 Liberal Arts)

GILBERT LOGAN HOUSER, B. S., 1891; M. S., 1892, Iowa;
PH. D., 1901, Johns Hopkins.

Professor of Animal Biology and Director of the Zoological
Laboratories, 1892. 430 Iowa Ave. (101 Science Hall)

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein;
B. D., 1881, Yale; D. C. L., 1898, Penn College.

Professor and Head of the Department of Political Economy
and Sociology and Director of the School of Political
and Social Science, 1889.
11 E. Bloomington St. (205 Liberal Arts)

CHARLES WARREN WEEKS, B. S., 1898, State University of Ne-
braska; First Lieutenant 30th Infantry, U. S. A.
Professor of Military Science and Tactics and Commandant
of the Cadet Battalion, 1905. 6 Bloom Terrace (Armory)

HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.

Professor of Entomology, and Assistant Curator of the
Museum of Natural History, 1894.
911 Iowa Ave. (303 Science Hall)

CLARENCE WILLIS EASTMAN, B. S., 1894, Worcester Poly-
technic; M. A., PH. D., 1898, Leipzig.

Assistant Professor of German, 1898..
225 Fairchild St. (102 Liberal Arts)

FREDERICK BERNARD STURM, B. A., 1892, Michigan.

Assistant Professor of German, 1892.
402 Church St. (102 Liberal Arts)

CLARENCE WYCLIFFE WASSAM, B. D., 1899; M. D., 1900,
Iowa State Normal; B. PH., 1903, Iowa.

Assistant Instructor in Political Economy and Sociology,
1903. 220 N. Dubuque St. (205 Liberal Arts)

THE COLLEGE OF APPLIED SCIENCE

REQUIREMENTS FOR ADMISSION TO UNDERGRADUATE STUDY IN THE ENGINEERING DEPARTMENTS

The requirements for admission imply substantially the completion of a high school course of four years, or its equivalent. Students from accredited schools are admitted without examination in those subjects for which they present the certificate of their school.

Persons over twenty-one years of age may be admitted to such work as they are qualified to undertake, but may not become candidates for degrees until the regular requirements for admission have been fully satisfied.

Thirty credits are required for admission. A credit is the equivalent of a study of high school grade pursued daily for a term or semester of eighteen weeks. Eight such credits represent one year's work.

Students presenting twenty-eight credits will be admitted conditionally. Deficiencies must be made up before the beginning of the second year. A regular student with entrance conditions will not be admitted to the sophomore class.

For entrance to the courses in engineering and chemistry, eighteen of the thirty credits are for required subjects; twelve may be for subjects chosen from the descriptive list on page 88 et seq. If but twenty-eight credits are presented, they must include the credits for mathematics.*

* Until 1907 provision will be made in the University for teaching solid geometry to those students who have been unable to present this subject for entrance.

REQUIRED CREDITS

English	6
*One foreign language	4
History and civics	2
Algebra	3
Plane and solid geometry	3
	<hr/>
	18

Candidates presenting thirty credits in acceptable preparatory subjects, but who are deficient in required subjects, may be admitted conditionally. Such students must make up their deficiencies before the beginning of the second year.

ELECTIVES

The electives presented for admission may consist of additional work in foreign languages to complete the entire thirty credits, or of additional work of approved character in English, history, solid geometry, or science, as outlined under group V on page 95. Candidates are advised to present additional work in foreign language, English, history, or solid geometry rather than to present the maximum of six semesters' work in science. When additional work in Latin or modern languages is presented as an elective, it is provided that not less than two years be given to some one language, and not less than one year to each additional language that may be offered.

ADMISSION TO UNDERGRADUATE STUDY IN FORESTRY

The requirements for admission to undergraduate study in the course in forestry are the same as those for the courses in engineering, except that the required cred-

* The requirement in foreign language may be satisfied by two years of Latin, German or French, but not by a single year in each of two languages. It is preferred that the candidate for entrance offer German or French.

its number 17 instead of 18, and the elective credits number 13 instead of 12, solid geometry being omitted from the list of required subjects.

For a description of the courses required or accepted for admission and programme of entrance examinations see pages 86-99.

ADVANCED STANDING

Students from approved colleges bringing proper certificates of work and standing will be admitted without examination. In determining their position in the University, however, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, *provided they enter not later than the beginning of the senior year.* The assignment of studies will be at the discretion of the faculty.

The requirements that all applicants for admission to the University must bring certificates showing that they have completed two years' work in some one foreign language applies also to applicants for advanced standing.

COURSES OF STUDY IN ENGINEERING

The courses of study in the engineering group are designed to insure a thorough grounding in the fundamental principles underlying all engineering practice.

Instruction in the engineering department is by recitation, lecture and laboratory work. The recitation method is followed so far as practicable. A sufficient amount of field and laboratory work is given to thoroughly fix the principles taught in the class room, and to give the student sufficient skill in the elementary engineering operations of surveying and drawing to enable him to undertake such work immediately upon graduation. Much attention is paid to the design of engineering structures, machines and processes, to the end that the

graduate may be competent to design bridges, structures in masonry, water supply and sewerage systems, prime movers and machinery; to lay out and supervise the construction of power plants; and to direct and report upon mines, mining properties and metallurgical processes.

The courses offered, besides providing in each the fundamental principles of all, enable the student to specialize so far as is deemed wise in an undergraduate course, in civil, sanitary, mechanical, electrical, mining, or chemical engineering.

The work offered in the engineering courses is prescribed and one complete course extending through four years must be covered to secure the bachelor's degree in science in engineering.

Laboratory work requiring no preparation will be rated hour for hour at one-third time value of class room exercises requiring preparation, that is to say, a three-hour laboratory period will be considered equivalent to a single hour lecture or recitation.

A thesis is required for graduation from all courses. In general this thesis must be a report upon an original investigation of some engineering problem, or a complete design for some engineering structure, machine or plant.

The majority of the studies in the engineering courses are so interdependent that they can be profitably taken by the student only in the order indicated in the tabular statement.

Students of other departments of the University who have covered the necessary prerequisites may take courses in the engineering departments in so far as the rules of their respective departments permit.

Descriptions of the several courses of study will be found on page 297 et seq. In the following synopsis of work required in the engineering group, the numbers are those used in these descriptions. Odd numbers indicate work in the first semester; even numbers work in the second semester. The letters a and b following these numbers indicate respectively the first and second halves of the semester.

CIVIL ENGINEERING

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CIVIL ENGINEERING

FRESHMAN YEAR

	First Semester	Second Semester
English 101 (102)	2 hours	2 hours
Mathematics (First year group A)	5 hours	5 hours
Drawing (Engin. 1)	5 hours	
Descriptive geometry (Engin. 2)		5 hours
Chemistry 3 and 25	5 hours	
Surveying (Engin. 14)		5 hours
	<hr/> 17 hours	<hr/> 17 hours

SOPHOMORE YEAR

English 121 (122)	1 hour	1 hour
Mathematics (Second year group A)	5 hours	5 hours
Physics 3 (4)	5 hours	5 hours
Mineralogy (Geol. 3)	2½ hours	
Geology 4		2½ hours
Botany 25	2½ hours	
Surveying (Engin. 18)		3½ hours
Topographical drawing (Engin. 5)	1 hour	
	<hr/> 17 hours	<hr/> 17 hours

JUNIOR YEAR

English 131 (132)	1 hour	1 hour
Mechanics (Physics 13)	5 hours	
Materials of Engineering (En- gin. 22)		5 hours
Statics. [Engin. 19 (20)]	3 hours	3 hours
Contracts (Engin. 21a)	2½	
Hydraulics (Engin. 25b)	2½	
Water supply and sewerage (Engin. 28b)		2½ hours
Metallurgy (Chem. 14a)		1½ hours
Highways (Engin. 26a)		1 hour
Architecture (Engin. 31a)	1½ hours	
Water analysis (Chem. 45)	1½ hours	
Astronomy and geodesy (108)		3 hours
	<hr/> 17 hours	<hr/> 17 hours

SENIOR YEAR

English 141 (142)	1	hour	1	hour
Electrical engineering 59 (60)	5	hours	5	hours
Structural design [Engin. 23 (24)]	4	hours	5	hours
Thermodynamics and prime movers (Engin. 39)	5	hours		
Railroad engineering (Engin. 32a)			2½	hours
Economics 2b			2½	hours
Bacteriology 21	1	hour		
Thesis 100				
	16	hours	16	hours

SANITARY ENGINEERING

The course in civil engineering is itself an excellent basis for the work of the sanitary engineer, but for those who wish to specialize in sanitary work a course has been arranged based on the course in civil engineering, but introducing a more extensive study of bacteriology and water analysis, a course in biology, and a course in sanitary inspection, design and construction. These subjects replace astronomy and geodesy, metallurgy and architecture in the junior year, and one semester of structural design in the senior year, of the civil engineering course.

MECHANICAL ENGINEERING

FRESHMAN YEAR

	First Semester	Second Semester
	hours	hours
English 101 (102)	2	2
Mathematics (First year group A)	5	5
Drawing (Engin. 1)	5	
Descriptive Geometry (Engin. 2)		5
Chemistry 4, 26		5
Shopwork (Engin. 9)	5	
	17	17
	hours	hours

SOPHOMORE YEAR

English 121 (122)	1	hour	1	hour
Mathematics (Second year group A)	5	hours	5	hours
Physics 3 (4)	5	hours	5	hours
Surveying (Engin. 15)	5	hours		
Shopwork (Engin. 10)			3	hours
Kinematics (Engin. 34 and 6)			3	hours
Machine drawing (Engin. 3)	1	hour		
	17	hours	17	hours

JUNIOR YEAR

English 131 (132)	1	hour	1	hour
Mechanics (Physics 13)	5	hours		
Materials of engineering (Engin. 22)			5	hours
Statics (Engin. 19)	3	hours		
Contracts (Engin. 21a)	2½	hours		
Hydraulics (Engin. 25b)	2½	hours		
Thermodynamics and heat engines (Engin. 40)			5	hours
Kinematics (Engin. 35 and 7)	3	hours		
Advanced Shopwork (Engin. 12)			2	hours
Metallurgy (Chem. 14a)			1½	hours
Hydraulic machinery (Engin. 46b)			1½	hours
Mechanical Laboratory (Engin. 42)			1	hour
	17	hours	17	hours

SENIOR YEAR

English 141 (142)	1	hour	1	hour
Electrical engineering 59 (60)	5	hours	5	hours
Heat engines (Engin. 41)	5	hours		
Machine design [Engin 37 (38a)]	3	hours	2½	hours
Mechanical Laboratory [Engin. 43 (44)]	2	hours	2	hours
Economics 2b			2½	hours
Heating and ventilating (Engin. 36a)			1	hour
Factory management (Engin. 36b)			1	hour
Thesis 100.				
	16	hours	15	hours

ELECTRICAL ENGINEERING

Freshman and sophomore years same as in mechanical course.

JUNIOR YEAR

English 131 (132)	1	hour	1	hour
Mechanics (Physics 13)	5	hours		
Materials of engineering (En- gin. 22)			5	hours
Electrical measurements (Phy- sics 9)	3	hours		
Electrical engineering (Engin. 51)	3	hours		
Electric circuit (Engin. 52)			4	hours
The electro chemistry 8			4	hours
Contracts (Engin. 21a)	2½	hours		
Hydraulics (Engin. 25b)	2½	hours		
Metallurgy (Chem. 14a)			1½	hours
Hydraulic machinery (Engin. 46b)			1½	hours
	17	hours	17	hours

SENIOR YEAR

English 141 (142)	1	hour	1	hour
Thermodynamics and prime movers (Engin. 39)	5	hours		
Dynamo electric machinery [Engin. 53 (54a)]	3	hours	2½	hours
Machine design (Engin. 37)	3	hours		
Steam engine laboratory (En- gin. 43)	2	hours		
Electrical testing [Engin. 55 (56)]	2	hours	2	hours
Telephone and telegraph (En- gin. 62a)			2½	hours
Electrical power stations (En- gin. 64b)			2½	hours
Economics 2b			2½	hours
Thesis 100.				
	16	hours	13	hours

MINING ENGINEERING

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MINING ENGINEERING

FRESHMAN YEAR

		First Semester		Second Semester
English 101 (102)	2	hours	2	hours
Mathematics (first year group A)	5	hours	5	hours
Drawing (Engin. 1)	5	hours		
Descriptive geometry (Engin. 2)			5	hours
Chemistry 3, 25	5	hours		
Chemistry 40			2	hours
Surveying (Engin. 16)			3½	hours
		<hr/>	<hr/>	
	17	hours	17½	hours

SOPHOMORE YEAR

English 121 (122)	1	hour	1	hour
Mathematics (second year group A)	5	hours	5	hours
Physics 3 (4)	5	hours	5	hours
Chemistry 39	3	hours		
Electro Chemistry 8			4	hours
Geology 1 (2)	2	hours	2	hours
Machine drawing (Engin. 3)	1	hour		
		<hr/>	<hr/>	
	17	hours	17	hours

JUNIOR YEAR

Mechanics (Physics 13)	5	hours		
Materials of engineering (Engin. 22)			5	hours
Assaying (Chem. 52)			5	hours
Mineralogy [Geol. 31 (32)]			5	hours
Ore dressing (Engin. 75a)	2½	hours		
Hydraulics (Engin. 25b)	2½	hours		
Statics [Engin. 19 (20) part]	2	hours	2	hours
Optical properties of crystals (Physics 11)	2	hours		
Petrology (Geol. 11)	3	hours		
		<hr/>	<hr/>	
	17	hours	17	hours

SENIOR YEAR

Mining [Engin. 77 (78)]	5	hours	5	hours
Thermodynamics and prime movers (Engin. 39)	5	hours	5	hours
Electrical engineering (Engin. 58)			5	hours
Metallurgy [Chem. 11 (12)]	3	hours	3	hours
Ore deposits [Geol. 33 (34)]	2	hours	2	hours
Mining law	1	hour	1	hour
Thesis 100				
	<hr/>		<hr/>	
	16	hours	16	hours

THE COURSE IN CHEMICAL ENGINEERING

The increasing activity in American manufacturing has created a demand for trained men to take charge of the management of processes which involve a knowledge of the principles of both chemistry and mechanical engineering for their successful operation. This course is intended to prepare men who wish to devote themselves to one of the chemical industries by laying such a foundation that their rise in a selected field may be rapid and permanent.

CHEMICAL ENGINEERING

Freshman year same as in mechanical engineering course

SOPHOMORE YEAR

		First Semester		Second Semester
English 121 (122)	1	hour	1	hour
Mathematics (second year group A)	5	hours	5	hours
Physics 3 (4)	5	hours	5	hours
Mineralogy (Geol. 3)	2½	hours		
Geology 4			2½	hours
Quantitative analysis 39 (40)	2½	hours	3½	hours
Machine drawing (Engin. 3)	1	hour		
	<hr/>		<hr/>	
	17	hours	17	hours

JUNIOR YEAR

English 131 (132)	1	hour	1	hour
Mechanics (Phys. 13)	5	hours		
Materials of engineering (En- gin. 22)			5	hours
Organic chemistry 53 (54)	2	hours	2	hours
Organic chemistry 55 (56)	2	hours	2	hours
Metallurgy [Chem. 11 (12)]	3	hours	3	hours
Electro chemistry 8			4	hours
Contracts (Engin. 21a)	2½	hours		
Hydraulics (Engin. 25b)	2½	hours		
	18	hours	17	hours

SENIOR YEAR

English 141 (142)	1	hour	1	hour
Industrial chemistry 19 (20)	3	hours	2½	hours
Electrical engineering 59 (60)	5	hours	5	hours
Thermodynamics and prime movers (Engin. 39)	5	hours		
Engineering chemistry	2	hours	2	hours
Surveying (Engin. 16)			3½	hours
Factory management (Engin. 36b)			1	hour
Thesis 100.				
	16	hours	15	hours

THE COURSE IN CHEMISTRY

This is designed to meet the increasing demand for trained chemists as teachers, investigators, analysts, or professional workers in some of the other lines of technical or applied chemistry. It extends through four years and the degree of Bachelor of Science will be conferred upon those who successfully complete it. The first three years are devoted to the fundamental branches, together with other university courses so closely allied as to be indispensable to the chemist. In the last year such a choice of electives is offered as to enable the student

either to materially broaden his field or to devote himself to advanced work in some special part. The degree of Master of Science may be gained by one year's additional study in the University; that of Doctor of Philosophy in three years after the acquisition of the baccalaureate degree.

The essentials of the course are:

Ten semester hours of English.

Sixty semester hours as a minimum in chemical branches, which must include the equivalent of forty semester hours in general, physical and organic chemistry with qualitative and quantitative analysis.

Two years of German.

One year each of mathematics, physics and French. (For the foreign languages preparatory work in the same subjects may be offered as a substitute for university work).

A total of 136 semester hours.

The following arrangement is desirable although it may be varied with the consent of the head of the department.

CHEMISTRY**305****CHEMISTRY****FRESHMAN YEAR**

	First Semester		Second Semester	
English 101 (102)	2	hours	2	hours
Chemistry 1 (2)	3	hours	3	hours
Chemistry 5 (6)	2	hours	2	hours
Mathematics (First year group A)	5	hours	5	hours
German 1 (2)	5	hours	5	hours
		<hr/>		
		17 hours		
		<hr/>		
		17 hours		

SOPHOMORE YEAR

English 121 (122)	1	hour	1	hour
Physics 3 (4)	5	hours	5	hours
German 3 (4)	3	hours	3	hours
Qualitative analysis 23 (24)	2	hours	3	hours
Theory of analytical chemistry 33	1	hour		
And of the following enough to make 16 to 18 hours—				
Physiological chemistry 59 (60)				
61 (62)	3	hours	3	hours
Mineralogy [Geol. 11 (12)]	3	hours	3	hours
Mathematics (Second year group A)	5	hours	5	hours
Animal biology [Zoology 1 (2)]	4	hours	4	hours
		<hr/>		
		16 to 18 hrs.		
		<hr/>		
		16 to 18 hrs.		

JUNIOR YEAR

English 131 (132)	1	hour	1	hour
Organic chemistry 53 (54)	2	hours	2	hours
Organic chemistry 55 (56)	3	hours	3	hours
Quantitative analysis 35 (36)	4	hours	4	hours
Physical chemistry 7 (8)	2	hours	2	hours
Physical chemistry 9 (10)	1	hour	1	hour
French 1 (2)	5	hours	5	hours
		<hr/>		
		18 hours		
		<hr/>		
		18 hours		

SENIOR YEAR

English 141 (142)	1	hour	1	hour
Chemical seminar 77 (78)	1	hour	1	hour
And of the following, or of courses not previously pursued, enough to make 17 hours.				
Elective, any course in the University	5	hours	5	hours
History of chemistry 22			1	hour
Applied electro-chemistry 71	1	hour		hour
Electro-chemical preparations 73 (74)	1	hour	1	hour
Electro-chemical analysis 41 (42)	1	hour	1	hour
Organic analysis 44			1	hour
Advanced quantitative analysis 37 (38)	1 to 5	hours	1 to 5	hours
Advanced physiological chemistry 63 (64)	3	hours	3	hours
Advanced physical chemistry 75 (76)	1	hour	1	hour
Advanced organic chemistry 57 (58)	3 to 5	hours	3 to 5	hours
Assaying 52				1 hour
Metallurgy 11 (12)	3	hours	3	hours
Toxicological analysis 49 (50)	2	hours	2	hours
Industrial chemistry 19 (20)	1	hour	1	hour
Sanitary chemistry 45, 47, (48)	3	hours	3	hours
	17	hours	17	hours

COURSE OF STUDY IN FORESTRY

The constantly increasing interest in forestry in this country, and the recognition of the wastefulness which has characterized our treatment of forest resources in the past, has resulted in a growing demand for the services of those who can intelligently administer such resources. There is also a rapidly expanding field of activity opening to those who are competent to direct the decorative planting of towns and cities. In addition to these there is a popular demand for wider information concerning tree culture for both or-

namental and economic purposes, and intelligent citizens are awakening to a realization of the necessity not only of reproducing our former forests, but of extending them beyond their original limits.

The course in forestry is offered to meet, in part, these demands for trained specialists, as well as for wider general information on forestry subjects. It extends over four collegiate years, with additional field work.

The courses in English, chemistry, physics, geology, bacteriology, drawing, descriptive geometry, surveying, mechanics, hydraulics, highways, and materials of engineering (including timber physics) are the same as those prescribed in the course in civil engineering. The course in economics is that designed for engineers.

The course in practical zoology deals largely with the zoology of the forest. The courses in mathematics lead to the required work in the department of civil engineering. A brief course in simple bridge-construction will also be introduced in connection with other technical work.

A course in a special branch of forestry may be selected by the student in place of Spanish in the first semester of the senior year. Students who contemplate seeking employment in the Philippines or Porto Rico, or in the Southwest, are advised to take Spanish.

FORESTRY

FRESHMAN YEAR

	First Semester	Second Semester
English 101 (102)	2 hours	2 hours
Mathematics (First year group C)	4 hours	4 hours
Drawing (Engin. 1)	5 hours	
Descriptive geometry (Engin. 2)		5 hours
Chemistry 3, 25	5 hours	
Plant morphology (Bot. 6)		4 hours
Dendrology (Bot. 15) chiefly Saturday	1 hour	
Surveying (Engin. 16) field work Saturday		3½ hours
	<hr/>	<hr/>
	17 hours	18½ hours

SOPHOMORE YEAR

	First Semester		Second Semester	
English 121 (122)	1	hour	1	hour
Mathematics (Second year group C)	4	hours	4	hours
Physics 3 (4)	5	hours	5	hours
Plant physiology and histology (Bot. 1)	2	hours		
Plant ecology (Bot. 3)	3	hours		
Dendrology (Bot. 25)	2½	hours		
Geology 4			2½	hours
Plant pathology (Botany 14)			2	hours
Surveying, etc. (Engin. 18)				
Field work Saturday			3½	hours
	<hr/>		<hr/>	
	17½	hours	18	hours

JUNIOR YEAR

German or French 1 (2)	5	hours	5	hours
Meteorol. and climatology (Phys. 20)	2	hours	2	hours
Mechanics (Phys. 13)	5	hours		
Hydraulics (Engin. 25b)	2½	hours		
Forest mensuration (Bot. 34a)			2½	hours
Bacteriology 21	1	hour		
Economics 2b			2½	hours
Forest products (Bot. 32)			3	hours
Highways (Engin. 26a)			1	hour
Arboriculture (Bot. 27) partly Saturdays	2½	hours		
Arboriculture (Bot. 28) 3rd qr. 1 hr.; 4th qr. 3 hrs.			2	hours
	<hr/>		<hr/>	
	18	hours	18	hours

ASTRONOMY

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SENIOR YEAR

Materials of Engineering (En- gln. 22)			5	hours
Forestry in the U. S. (Bot. 34)	5	hours		
Silviculture [Bot. 29 (30)]	3	hours	3	hours
Practical zoology 11 (12)	3	hours	3	hours
Lumbering (Bot. 31)	3	hours		
Forest protection (Bot. 38)			2	hours
Forest management (Bot. 36)			3	hours
History of forestry (Bot. 40)			1	hour
Spanish 1, or Special forestry	3	hours		
	17	hours	17	hours

Throughout the course the equivalent of at least one scheduled hour of work is done in the field on Saturdays.

DESCRIPTION OF COURSES*

ASTRONOMY

PROFESSOR WELD

The courses offered in Astronomy are described on pages 199-200.

BACTERIOLOGY

PROFESSOR ALBERT; DR. EGD AHL, MR. BYRNES, MR. RICHARDS

21. BACTERIOLOGY OF WATER—A didactic, recitation, demonstration and laboratory course designed to give the student a knowledge of the principles and working methods used in bacteriology, especially those concerned in making a bacteriological analysis of water. The course will include such subjects as the classification of micro-organisms, their modes of growth, their cultivation, isolation and identification. The relation of certain organisms to health and disease will also be considered, as well as the different methods of disinfection and sterilization. The student will be ex-

pected to acquire a working knowledge of the methods used in making a quantitative examination of water such as is necessary to determine the degree of bacterial contamination, or to determine the efficiency of the method of filtration processes. He will also be expected to be able to make the more simple presumptive tests for the presence of colon bacilli and other micro-organisms. He should, moreover, gain sufficient knowledge of the subject to enable him to draw deductions from and pass judgment upon, bacteriological examinations. It is not intended, however, that the course should prepare the student to make thorough qualitative bacteriological examinations, especially with reference to the isolation of disease-producing germs. For such training it will be necessary for him to take course 3 as outlined below. Course 21 is required of students in civil engineering.

First semester; one hour a week.

3. **GENERAL BACTERIOLOGY**—A didactic, recitation, demonstration and laboratory course, which includes the preparation of artificial culture-media, the cultivation of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different pathogenic microbes as they are related to the various infectious processes. Special attention is given to the bacteriologic technique of water, and the practical application of bacteriologic technique to hygiene and clinical diagnosis. The didactic lectures will include such subjects as cannot properly be pursued in connection with the laboratory work. About seventy different micro-organisms are studied in the laboratory.

First semester; 3 class room hours, 4 laboratory hours, a week. Time to be arranged.

BOTANY AND FORESTRY

PROFESSOR MACBRIDE; PROFESSOR SHIMEK

1. **PLANT HISTOLOGY AND PHYSIOLOGY**—An elementary laboratory course in histology, accompanied by lectures on the fundamental physiological processes in plants, with special reference to the origin of the principal groups of plant-

products, such as carbohydrates, proteids, etc. Professor SHIMEK.

Two hours a week during the first semester.

3. **PLANT ECOLOGY**—A course of lectures, many of them illustrated, supplemented by collateral reading, but based chiefly upon field observations and investigation. The most important problems of ecology in the broadest sense are discussed, and illustrated by field and laboratory work. The local flora, developed under the diversified conditions existing in the region about the University, furnishes abundant material for the study and illustration of the more important phases of modern ecology. Special attention is given to forest ecology. Professor SHIMEK.

Three hours a week during the first semester.

4. **PLANT MORPHOLOGY**—This course consists of lectures and laboratory work, and is intended to illustrate the structure and life-history of the several types presented by the vegetable kingdom. Goebel's *Outlines of Classification* is used as a basis, but all the leading text books are at the service of the student.

Special attention is paid to all available forms of our cryptogamic flora; slime moulds, schizophytes, diatoms, algæ, fungi, mosses, ferns, and their allies are successively passed in review. This course presents a comparative view of the principal plant types, and is introductory to several subsequent courses. Professor MACBRIDE.

Four hours a week during the second semester.

14. **PLANT PATHOLOGY**—A study of the causes of plant diseases and deformities. Special attention is given to pathological organisms, and to external conditions producing pathological organisms in the plant. Professor MACBRIDE.

Second semester; two hours per week.

15. **LOCAL FLORA**—A brief course in the study of the stems, buds, leaves, flowers and fruits of local native and cultivated trees with a view to the ready recognition of species in the field. Professor SHIMEK.

First semester; one hour a week.

25. **DENDROLOGY**—A comparative microscopic study of woods with special reference to quality. A study of the grain, color and other striking characters of wood for pur-

poses of recognition. Attention is also given to causes of decay of wood. Professor MACBRIDE and Professor SHIMEK.

First semester; two hours a week.

27. **ARBORICULTURE**—The study of the life-history of a tree; its mode of growth and repair. The effect of environment on trees. The selection, planting and treatment of trees for streets, lawns, and parks. The course consists of lectures, many of which are illustrated, and of field-work, and is open to more advanced students in botany. Professor SHIMEK.

First semester; five hours a week during the first quarter.

28. **ARBORICULTURE**—A continuation of course 27. Further treatment of seeds of trees. Methods of seeding, and nursery work. Transplanting and replanting trees. Selection and treatment of trees for wind-breaks, prairie groves, and small wood-lots. Use of nurse trees and methods of thinning applicable to small tracts. Special attention is given to forest conditions in Iowa. Frequent excursions to neighboring prairie groves and timber lots will furnish practical demonstrations of the subjects discussed. Practical tree-plantation work will also be undertaken.

Students in forestry will schedule for two hours during the second semester (one hour during the third quarter, and three hours during the fourth quarter.) A large part of the work will be done in the field on Saturdays. Professor SHIMEK.

29 (30). **SILVICULTURE**—The perpetuation of the forest. Methods of improving forests. The value and treatment of mixed and pure stands. The determination of the rate of growth. The principles and practices of reforestation. A portion of the course in mid-winter consists of lectures and reading on silviculture in foreign countries. Tree-plantation work will be continued in connection with this course. Professor SHIMEK.

Three hours a week throughout the year.

31. **LUMBERING**—The methods of lumbering practiced in this country, including methods of transportation in the forest. Attention will also be given to milling and manufacturing operations. In connection with this course stud-

ents will be expected to spend two or three weeks in lumber camps during the holiday vacation.

Three hours a week during the first semester.

32. **FOREST PRODUCTS**—A discussion of the value of various products of the forest, the uses to which they are put, and the manner in which they are obtained and treated. Professor SHIMEK.

Three hours a week during the second semester.

33. **FORESTRY IN THE UNITED STATES**—Former extensive forests, and their destruction by wasteful methods. The physiographic and industrial consequences. The work of the U. S. Bureau of Forestry. The forest policy of the general government and of the several states. Forestry in the Philippines and Porto Rico. Healthfulness, climatic conditions, etc.

Five hours a week during the second semester.

34. **FOREST MENSURATION**—Practical methods employed in the determination of the contents of logs, standing trees, entire stands, etc. Further practice in the determination of the age and rate of growth of trees will be given. Professor SHIMEK.

36. **FOREST MANAGEMENT**—The management of forest areas with a view to continued profitable yield. The preparation of working plans for larger forest areas. Each student will prepare a working plan for a selected area. The plan will include maps, estimates of timber, best methods of cutting and handling, subsequent treatment of tract, etc.

Three hours a week during the second semester.

38. **FOREST PROTECTION**—The discussion of methods of protecting the forest against fires, parasites, cold, winds, and other injurious agencies.

Two hours a week during the second semester.

40. **HISTORY OF FORESTRY**—A lecture and reading course reviewing the development of forestry in foreign countries, and in the United States.

One hour a week during the second semester.

Courses 31, 33, 34, 36, 38 and 40 will be given under the direction of Professor Shimek. It may be necessary to give some of them during alternate years, but in such manner that students who complete the course will have had all of them.

CHEMISTRY

PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE, ASSISTANT PROFESSOR KARSLAKE, MR. BRYDEN, MR. POORE, MR. REMINGTON, MR. BROWN

The following courses are offered. Regarding their arrangement into a symmetrical four year course of study, or the proper selection of electives as a preparation for teaching, research, or the pursuit of some of the branches of chemistry as a profession, students are urged to consult freely the head of the department.

The courses offered in Chemistry are described on pages 188-190.

ECONOMICS

PROFESSOR LOOS; MR. WASSAM

2b. ECONOMICS—A special course in general economics prescribed for seniors in mechanical, civil and electrical engineering. Professor Loos and Mr. Wassam.

Second semester; second half, daily at 8:00.

ENGINEERING

PROFESSOR RAYMOND; PROFESSOR MAGOWAN, PROFESSOR WILDER, PROFESSOR FORD, ACTING PROFESSOR OHLE, ASSISTANT PROFESSOR HIGBEE, MR. LAMBERT, MR. BRYDEN, MR. BAENDER, AND ASSISTANTS

1. DRAWING—Use of instruments; lettering; geometrical constructions; orthographic, isometric and cabinet projections; use of flat and graduated tints; tinting with water-colors; working drawings; assembled and detail drawings; free-hand sketches; drawing from sketches; dimensioning; arrangement of views; tracing; blue printing; standard conventions. Assistant Professor HIGBEE; Mr. —.

First semester; fifteen hours a week.

2. DESCRIPTIVE GEOMETRY—Problems on the point, line and plane, and the application of these problems to practical engineering; single and double curved surfaces; inter-

sections and developments of surfaces; pattern making for sheet metal work; warped surfaces; stereotomy; perspective. Assistant Professor HIGBEE; Mr. ———.

Second semester; three recitations and six drawing room hours a week.

3. MACHINE DRAWING—Free-hand sketches of machine and machine parts; finished assembled and detailed drawing of machine and machine parts; reading working drawings; drafting office practice. This course is not a course in designing but is intended to illustrate the general method of making shop drawings of machines and machine parts already designed and built. For this purpose, special use will be made of the machine tools in the shop. Assistant Professor HIGBEE.

First semester; three hours a week.

5. TOPOGRAPHICAL DRAWING—Topographical conventions; maps illustrating methods of showing topography for railroad location, allotments and subdivisions of lands, parks, and engineering improvements in general. As this course will be correlated with the course in surveying, it will serve to enable the student to represent on drawings the character and contour of the ground he has already measured in the field. Assistant Professor HIGBEE.

First semester; three hours a week.

6 (7). KINEMATICS DRAWING—Design of cycloidal, involute, and bevel gears; cams; link, and parallel motions; couplings; fastenings. This course is correlated with the course in Kinematics, and gives the student a practical acquaintance with the problems in transmission of motion, the theory of which he has already studied. Assistant Professor HIGBEE.

Second and first semesters; three hours a week.

9. SHOPWORK—Woodworking and forging: (a) Bench and lathe work in wood, including joinery, turning and pattern making, and the care and use of all wood-working tools. (b) Forging of iron and steel, welding, hardening, tempering and annealing, proper selection of steel for tools of various kinds, and special methods of tempering. Mr. BAENDER.

First semester; fifteen hours a week.

10. **SHOPWORK**—Bench and machine work in metals: This includes chiseling, filing, scraping, lathe work; use of planer, shaper, milling machines and grinder; screw cutting, etc. Mr. BAENDER.

Second semester; nine hours a week.

12. **ADVANCED SHOPWORK**—Tool making: This course follows the course in kinematics, and will be given only to those who have completed course 10. The student will make various forms of milling cutters, twist drills, taps, reamers, and gear wheels. The tools will be hardened, tempered, and ground. Mr. BAENDER.

Second semester; six hours a week.

14. **SURVEYING**—Theory and use of field instruments; leveling; farm and city surveying; United States public lands; topographical, hydrographical, and mine surveying; simple curves; volumes. Prerequisites: Mathematics 21a, 23b. Professor RAYMOND, Professor MAGOWAN, Mr. ———.

Second semester; the equivalent of three and one-half class room hours a week, with field work three afternoons each week during the fourth quarter.

15. **SURVEYING**—Same as Surveying 14. Professor RAYMOND, Professor MAGOWAN, Mr. ———.

First semester: Equivalent of three and one-half class room hours a week, with field work three afternoons each week during the first quarter.

16. **SURVEYING**—The theory and use of field instruments; leveling; United States public lands; land, topographical, and mine surveying; railroad curves and volumes. Prerequisites: Mathematics 21a and 23b. Professor RAYMOND, Professor MAGOWAN, Mr. ———.

Second semester; three class room hours each week, with field work on Saturday forenoons during the fourth quarter.

18. **SURVEYING**—Railroad surveying, including preliminary and location surveys; simple, compound and spiral curves; the laying out and measurement of work; the making of maps, profiles and estimates. Prerequisite: Engineering 14, 15 or 16. Professor RAYMOND, Professor MAGOWAN, Mr. ———.

Second semester; three class room hours a week and field work Saturday forenoons during the fourth quarter.

19 (20). **STATICS**—This course embraces a study of both analytical and graphical determination of stresses in roof trusses and bridges. Plate girders, parallel and curved chord bridges, draw spans and cantilevers are treated. Prerequisite: Physics 13. Mr. LAMBERT.

Throughout the year; two class room hours and three drawing room hours a week.

21a. **CONTRACT LAW AND SPECIFICATIONS**—A study of the fundamental principles of contract law; the application of these principles in formulating and interpreting contracts; the critical study of form and matter of specifications for engineering works. Professor MAGOWAN.

First quarter; five hours a week.

22. **MATERIALS OF ENGINEERING**—Mathematical theory of forces in beams, columns, and shafts, with the resultant deformations. Physical characteristics of the materials of engineering as determined by tests. Prerequisites: Mathematics 25 and 26a, Physics 3, 4, and 13. Mr. LAMBERT.

Second semester: five class room hours a week, with work in the testing laboratory during the fourth quarter.

23 (24). **STRUCTURAL DESIGN**—This course will include a thorough study of the details of existing structures, the data to be obtained in the field, and from blue prints and photographs; complete designs of a girder, a truss, and an arch bridge; the theory and practice of the design of retaining walls, dams, and foundations; reinforced concrete will be fully treated. Prerequisites: Engineering 19, 20, 22. Mr. LAMBERT.

Throughout the year; four periods a week, first semester and five periods, second semester; recitation and drawing room work as required.

25b. **HYDRAULICS, HYDROSTATICS AND HYDRODYNAMICS**—Theory and measurement of flow through orifices, tubes and pipes, over weirs, in conduits, rivers, and canals; text book work with illustrative laboratory practice. Prerequisite: Physics 13. Professor MAGOWAN.

Second quarter; five hours a week.

26a. HIGHWAYS—A study of the good roads problem from the standpoints of economy and administration; construction and maintenance of country highways and city streets and walks; cleaning of city streets; desirability and cost of the various kinds of pavements, together with the consideration of street grades and cross sections; methods of assessing costs of construction. Professor MAGOWAN.

Second semester; two hours a week during the third quarter.

28b. WATER SUPPLY AND SEWERAGE—(a) The sources of public water supply; methods of collecting, storing and purifying and standards of purity of potable water; principal features of water works construction, including reservoirs, filtering plants and distributing systems. (b) Design of sewers and sewer systems, both separate and combined; cleaning of cities and towns; methods of sewage disposal. Sewer details as found in modern plans and specifications are carefully studied and attention is paid to the item of cost. Prerequisite: Engineering 25b. Professor MAGOWAN.

Fourth quarter; five hours a week.

30. SANITARY INSPECTION, DESIGN AND CONSTRUCTION—A study of house plumbing methods; construction, maintenance and inspection of plumbing fixtures and systems; problems in design; designs for estimates of cost of water supply and sewerage systems and purification plants. Prerequisites: Engineering 25b, 28b. Professor MAGOWAN.

Second semester; four hours a week.

31a. ARCHITECTURE AND BUILDING CONSTRUCTION—History of architecture and principal details of building construction. Professor FAIRBANKS.

First quarter; three hours a week.

32a. RAILROAD ENGINEERING—Train, curve and grade resistance; momentum grades; hauling capacity of locomotives; operating expense; railroad location and construction. Prerequisites: Engineering 18, Physics 13. Professor RAYMOND.

Third quarter; five hours a week.

34 (35). KINEMATICS—The principles of mechanism showing the geometrical construction and proper forms for

rolling curves, gear teeth, cams, link motions and trains of mechanism. Prerequisites: Engineering 1, 2, 3, and 9. Mathematics 23b and 24. Acting Professor OHLE.

Second and first semesters; two class room hours a week.

36a. **HEATING AND VENTILATING**—Principles of ventilation; amount of air required for warming; radiating surfaces; radiators and heating surfaces; systems of piping; steam and hot water systems; hot air; mechanical ventilators; heating with electricity. Prerequisites: Engineering 40 and 41. Acting Professor OHLE.

Third quarter; two hours a week.

36b. **FACTORY MANAGEMENT**—Lectures and assigned readings upon modern methods of factory administration; arrangement and construction of shops; cost of power; transmission of power; cost of labor and material; cost systems and a general study of the commercial side of manufacturing. Prerequisites: Engineering 40 and 41, or 39. Acting Professor OHLE.

Fourth quarter; two hours a week.

37. **MACHINE DESIGN**—The application of the laws of velocity, force and strength of materials to the design of machinery, including shells, tubes, plates, machine frames, toothed and belt gearing, shafts, journals and hangers, springs, bolts, keys, etc., etc. Prerequisites: Engineering 1, 2, 3, 6, 7, 9, 10, 12, 22, 34, and 35; Mathematics 25 and 26a, Physics 13. Acting Professor OHLE.

First semester; three class room hours a week.

38a. **MACHINE DESIGN DRAWING**—The designing and making complete detail and assembly drawings of machines, including the design of a horizontal or vertical return tubular boiler, and a simple or compound steam engine. Prerequisite: Engineering 37. Acting Professor OHLE.

Third quarter; five drawing room hours a week.

39. **THERMODYNAMICS AND PRIME MOVERS**—Brief course in thermodynamics, general principles underlying the design of boilers, steam engines, gas engines, and refrigerating machinery. Prerequisites: Physics 3 and 4, Mathematics 25 and 26a. Acting Professor OHLE.

First semester; five class room hours a week.

40 (41). **THERMODYNAMICS AND HEAT ENGINES**—The laws of thermodynamics and their applications to perfect gases, saturated and superheated vapors; the thermodynamics of the steam engine; valve and valve diagrams; link motions; governors; fly wheels; steam engine performance; hot air engines; gas and oil engines; air compressors; refrigerating machinery; fuels; boilers and steam generators; stokers; natural and artificial draft; chimney design; smoke prevention; testing and care of boilers. Prerequisites: Engineering 34 and 35, Physics 3 and 4, Mathematics 25 and 26a. Acting Professor OHLE.

Second semester junior and first semester senior; five class room hours a week.

42. **MECHANICAL LABORATORY**—Measurements of power by means of the brake and dynamometer, and the determination of the efficiency of complete machines. Prerequisites: Engineering 9, 34, 35. Acting Professor OHLE.

Second semester; three hours a week.

43 (44). **MECHANICAL ENGINEERING LABORATORY**—Calibration of gauges, thermometers and indicator springs; calorimetry; valve setting; efficiency tests of condensers, boilers, steam and gas engines, and of complete plants. Prerequisite: Engineering 42, and to accompany Engineering 41. Acting Professor OHLE.

Throughout the year; six hours a week. Students in Electrical Engineering take this course six hours a week during the first semester.

46b. **HYDRAULIC MACHINERY**—A study of the theory and design of overshot, breast and undershot wheels; impulse wheels; impulse and reaction turbines. Prerequisites: Engineering 25b. Acting Professor OHLE.

Fourth quarter; three class room hours a week.

51. **ELECTRICAL ENGINEERING**—An elementary course on the production, distribution and utilization of electrical energy; designed as an introduction to the extended courses dealing with particular classes of apparatus. Prerequisite: Physics 3 and 4. Professor FORD.

First semester; three class room hours a week.

52. **THE ELECTRIC CIRCUIT**—A quantitative study of electric and magnetic fields and the electric circuit. The

subject matter of this course forms the foundation for all the courses dealing with particular classes of apparatus. Prerequisite: Physics 3 and 4 and Mathematics, Group A. Professor FORD and assistant.

Second semester; three class room hours and one laboratory period a week.

53 (54a). **DYNAMO ELECTRIC MACHINERY**—A detailed study of the construction, operation and design of dynamo electric machines, including transformers, synchronous machines, commutating machines, rectifying machines, synchronous commutating machines and induction machines. Prerequisite: Engineering 51 and 52. Professor FORD.

First semester; three class room hours a week, third quarter; five class room hours a week.

55 (56). **ELECTRICAL TESTING**—A laboratory course to accompany courses 53 and 54a. Prerequisite: Engineering 51 and 52. Professor FORD and assistant.

Throughout the year; six hours a week.

58. **ELECTRICAL ENGINEERING**—A brief course on the production, distribution and utilization of electrical energy, the operation of electric machines and signaling systems. Prerequisite: Physics 3 and 4. Professor FORD and assistant.

Second semester; four class room hours and one laboratory period a week.

59 (60). **ELECTRICAL ENGINEERING**—A general course on the selection and operation of electric machinery, power transmission system, lights, telephones, etc., for non-electrical engineers. Prerequisite: Physics 3 and 4, Mathematics Group A. Professor FORD and assistant.

Throughout the year; four class room hours and one laboratory period a week.

62a. **TELEPHONE AND TELEGRAPH**—A study of the various telephone and telegraph systems in common use. Prerequisite: Engineering 52. Professor FORD.

Third quarter; five class room hours a week.

64b. **ELECTRIC POWER PLANTS**—A study of the design and operation of plants for the generation and distribution of electrical energy, with special reference to the question

of cost. Prerequisite: Engineering 53 and 54a. Professor FORD.

Fourth quarter; five class room hours a week.

75a. ORE DRESSING—The principles and theory of ore dressing; hand dressing with continuous belts; crushing; jigging; slime concentration; milling; coal washing; etc. The course consists of lectures, recitations and laboratory work. Ample practice is given in the concentrating mill which forms a part of the university equipment. Mr. BRYDEN.

First quarter; five hours a week.

77 (78). MINING—Excavating; prospecting by pits and borings; support of excavations; coal mining; vein mining. Discussion of machinery and appliances in mine equipment; hoisting; drainage; air compression; ventilation; underground haulage; design of mine plant. Mr. BRYDEN.

Throughout the year; five hours a week.

80. Field courses in mining will be given at the end of the sophomore and junior years.

100. THESIS—The thesis consists of a complete design for an engineering structure or a report upon an original investigation of a technical problem.

GEOLOGY

PROFESSOR CALVIN; PROFESSOR WILDER

For a description of the courses offered in Geology see pages 179-183.

LANGUAGES

ENGLISH

PROFESSOR ANSLEY; MR. PIPER, MR. SLOAN

For a description of the work offered in English see courses 101 (102), 121 (122), 131 (132), 141 (142), page 138.

FRENCH

ASSISTANT PROFESSOR BUSH; ASSISTANT PROFESSOR LE DAUM,
MISS VOSS, MR. HUIZINGA, MISS SUNIER

For a description of the work offered in French see courses 1, 2, 3 (4), and 26, pages 124-126.

LANGUAGES

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GERMAN

PROFESSOR WILSON; ASSISTANT PROFESSORS STURM AND EASTMAN, MR. KOEHLER, AND MR. FERRISS

For a description of the work offered in German see courses 1 (2), 3 (4) page 130.

SPANISH

PROFESSOR LE DAUM

1 (2). ELEMENTARY COURSE—I. Translation of prose selections from modern Spanish authors. II. Zigel-Schelling's Spanish grammar. III. Composition based on Ford's Materials. IV. Pronunciation and Conversation. Assistant Professor LE DAUM and one instructor.

Throughout the year; Mon., Wed., Fri., at 9:00.

MATHEMATICS

PROFESSOR WELD; DR. DODD, MR. BAKER, MR. THORNE, MR. ———

For a description of the courses offered in Mathematics see pages 193-199.

PHYSICS

PROFESSOR GUTHE; PROFESSOR SMITH, MR. LORENZ, MR. ———, MR. WOOD

A. COURSES FOR UNDERGRADUATES

The courses offered in Physics are described 191-193.

ZOOLOGY

PROFESSOR NUTTING; PROFESSOR HOUSER, PROFESSOR WICKHAM, DR. STROMSTEN

For a description of the work offered in Zoology see courses 1 (2) and 11 (12) pages 168-173.

MILITARY SCIENCE AND TACTICS

COLONEL CHARLES W. WEEKS, 1ST LIEUTENANT 30TH INFANTRY

The work offered in Military Science and Tactics is described on pages 200-204.

PHYSICAL TRAINING AND ATHLETICS

PROFESSOR CHALMERS; MR. RULE, MISS KASTMAN, MR. CATLIN

See pages 204-206.

THE COLLEGE OF LAW

COLLEGE OF LAW

THE FACULTY

GEORGE EDWIN MACLEAN, PH. D., LL. D.,
President.

CHARLES NOBLE GREGORY, M. A., LL. D.,
Dean.

SAMUEL HAYES, M. S., LL. B.,
Resident Professor of Law.

ELMER ALMY WILCOX, B. A.,
Resident Professor of Law and Secretary of the Faculty.

LAWRENCE MARSHALL BYERS, M. A., LL. B.,
Resident Professor of Law in Charge of the Practice Cour

BARRY GILBERT, B. A., LL. B.,
Resident Professor of Law.

EMLIN MCCLAIN, M. A., LL. D., Chief Justice Supreme Court
of Iowa,
Honorary Professor of Jurisprudence.

HORACE EMERSON DEEMER, LL. D., Justice Supreme Court
of Iowa,
Honorary Professor of Jurisprudence.

SMITH MCPHERSON, LL. B., U. S. District Judge Southern
District of Iowa,
Lecturer on Law.

HORACE M. TOWNER, Judge of Third District, State of Iowa,
Lecturer on Constitutional Law.

MERTON LEROY FERSON, M. A., LL. B.,
Librarian.

WILLIAM ORAL WATTERS, B. S.,
Assistant in the Law Library.

HAROLD STEPHEN GREENLEAF, B. S.,
Assistant in the Law Library.

HOWARD ROLLIN CHURCHILL, B. PH.,
Assistant in the Law Library.

HOWARD OMAR ROGERS,
Assistant in the Law Library.

THE COLLEGE OF LAW

LENGTH OF COURSE

The College of Law was organized as a department of the University in 1868, the course of study covering one year. In 1884 the General Assembly passed an act requiring two years' study for all candidates for admission to the bar, and the course of study in this department was extended to the same period. By act of the Twenty-eighth General Assembly (see Acts of the Twenty-eighth General Assembly, Chapter 11, Supplement to Code, § 310) the period of study for admission to the bar was extended to three years, and a preliminary education substantially equivalent to a three years' high school course was required. With the view of conforming the course of study in the College of Law to this legislation and qualifying the graduates of the college for admission to the bar, the board of regents at its meeting in March, 1900, authorized the extension of the course from two to three years. The extension was made and the class of 1901 was the last class to graduate in the two years' course. The course is now one of three years.

INSTRUCTIONAL STAFF

At present the instruction is in the hands of a dean and four resident professors who devote their entire time to the school, and lecturers who give extended courses.

REQUIREMENTS FOR ADMISSION FOR THE COLLEGE YEAR 1906-1907

Graduates or matriculates of reputable universities or colleges, or graduates of state normal schools, may be admitted to the first-year class without examination upon

presentation of diplomas or certificates showing such graduation or matriculation.

Graduates in the four-year courses of accredited high schools or academies may be admitted to the first-year class without examinations upon presentation of diplomas or proper certificates of graduation.

Graduates of other high schools or academies whose courses of study are approved by the University and are at least three years in length, may be admitted to the first-year class without further examination upon presentation of certificates signed by the superintendent or principal and containing specific statements as to the amount of work done in each study. Blank certificates will be furnished upon application to the president of the University, the dean of the College of Law, or the university examiner.

All other applicants for admission will be required to pass entrance examinations in the subjects named in the programme given below, and prescribed by the supreme court of Iowa for the preliminary examination of applicants for admission to the bar.

PROGRAMME OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Monday, September 17, and Tuesday, September 18, 1906

Arithmetic,	1 credit,*	Monday,	8:00 A. M.
English and			
English grammar,	2 credits,	Monday,	11:00 A. M.
Reading,		Tuesday,	3:00 P. M.
Geography,	1 credit,	Monday,	3:00 P. M.
English history,	1 credit,	Monday,	4:30 P. M.
United States history,	1 credit,	Tuesday,	8:00 A. M.
Economics,	1 credit,	Tuesday,	9:00 A. M.
Algebra,	1 credit,	Tuesday,	10:00 A. M.
Civil government,	3 credits,	Tuesday,	1:30 P. M.
The elementary principles of the government land survey,	1 credit,	Tuesday,	9:00 A. M.
Physics,	2 credits,	Tuesday,	4:00 P. M.

* One preparatory credit is defined as the equivalent of one high school study five times a week during a semester at least eighteen weeks in length on the basis of four studies a day.

Spelling and penmanship will be judged from the manuscripts presented.

SECOND SEMESTER

Thursday, January 31, and Friday, February 1, 1907

The examinations will be held at the same hours as in the programme above, reading Thursday and Friday, for Monday and Tuesday respectively.

For *each separate* examination given at any other time than that announced in the programme which precedes, a fee of *one dollar* will be charged by the University. For *a series* of examinations covering two or more subjects a fee of *two dollars* will be charged. Special examinations are given only on permission of the faculty for good cause shown.

Any person expecting to enter the College of Law is advised to learn before the opening of the semester exactly what entrance examinations he will be required to pass. He can learn this by addressing the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present at *his first examination as indicated in the programme given above*. He should present himself at once at the office of the university examiner, who will give all necessary directions.

Any student displaying marked illiteracy in English may at any time by the rule of the College of Law be required by the faculty to take instruction in English.

Students will find it to their advantage to enter at the beginning of a semester and best to enter at the beginning of the university year.

INCREASED REQUIREMENTS FOR ADMISSION

ON AND AFTER SEPTEMBER 1, 1907

The following rule has been adopted in accordance with the requirement of the National Association of Law Schools:

The College of Law "shall require of all candidates for

SUBJECTS FOR ENTRANCE EXAMINATIONS 331

its degree at the time of their admission to the school, the completion of a four years' high school course, or such a course of preparation as would be accepted for admission to the State University, or to the principal colleges and universities in the state where the law school is located, provided that this requirement shall not take effect until September, 1907."

Accordingly, on and after September 1, 1907, applicants for admission who are graduates or matriculants of reputable universities or colleges or graduates of state normal schools or of four year courses of accredited high schools will be admitted as above provided without examination.

Applicants presenting *certificates* for all or any portion of the preparatory work specified in the following list of subjects for *examination*, on or after September 1, 1907, will be required to pass entrance *examinations* in enough other preparatory subjects to meet the requirements of four years of high school credit.

All other applicants, on and after September 1, 1907, will be required to pass entrance examinations in the subjects named in the following list, which includes the subjects prescribed by the supreme court of Iowa for the preliminary examination of applicants for admission to the bar; except that for the subjects marked with a * other subjects which in the judgment of the university examiner are real equivalents may be substituted, at the request of the applicant.

SUBJECTS FOR ENTRANCE EXAMINATIONS FOR SEPTEMBER, 1907

*Foreign language or additional history and

Science	4 credits
English and *literature.....	4 credits
English history.....	1 credit
United States history.....	1 credit
Civil government.....	1 credit
Political economy	1 credit

Elementary principles of the government land survey, and reading.....1 credit
Geography1 credit
Arithmetic1 credit
Algebra,—through quadratics.....3 credits
*Plane geometry2 credits
*Physics2 credits
Spelling and penmanship will be judged from the manuscripts presented.

ADVANCED STANDING

SECOND YEAR

Applicants for admission to second year standing must comply with the conditions hereinbefore set out for candidates for the first year class, and in addition thereto furnish certificates from approved law schools of work completed in or must pass successful examinations in five of the principal subjects of the first year, or their equivalents, namely, contracts, torts, evidence, agency, conveying, domestic relations, and criminal law and procedure; they must also furnish either a certificate showing one year's study of law in a reputable law school, or the affidavit of a member of the bar in regular practice, stating that the applicant has pursued a regular course of study of the law in his office for twelve months. Applicants who have already been admitted to the bar in states where an examination is required, may enter upon presentation of certificate showing admission to practice.

A form of affidavit of study in a law office which may be used is here inserted:

FORM APPROVED BY ATTORNEY-GENERAL,
JUNE 25, 1902.

STATE OF.....

.....COUNTY.

....., being first duly sworn, deposes and says that he is a member of the bar of the State of....., in regular practice, and has been such for more than years last past. That.....

ss.

*the applicant for admission to the bar, actually and in good faith pursued a regular course of the study of the law in the office of deponent for the period of.....
....., beginning on the day of
....., 190.., and continuing until the.....day
of.....190..*

*And deponent further says that the said.....
was diligent and attentive in the pursuit of his studies, and that he actually and in good faith devoted the entire time hereinbefore mentioned to the study of the law.*

.....

*Subscribed in my presence and sworn to before me
this.....day of....., 190...*

.....

THIRD YEAR

Applicants for admission to third year standing must comply with all the conditions hereinbefore set out for candidates for admission to the first year class, and in addition thereto furnish certificates from approved law schools of work completed in or must pass satisfactory examinations in five of the principal subjects of the first year course or their equivalents set out under the provisions governing second year standing; also in six of the principal subjects of the second year course, viz.: Bills and notes, sales, wills, probate law, partnership, corporations, equity, equity pleading, and real property, or the equivalent of these subjects; they must also present certificates or affidavits showing two years' study of law as above, one of which must have been in a reputable law school and the other either in a reputable law school or in the office of an attorney in active practice.

Students will not be admitted to classes in advance of their time credits.

Examinations for advanced standing will be held on Tuesday, September 18, 1906, at 9:00 A. M., in the Old Capitol building. They cannot be given at other times.

CREDITS FROM OTHER LAW SCHOOLS

As indicated above, students may be credited for work completed in other law schools which are approved to the extent of two years, if such work and attendance are duly certified, without examination in this college.

UNCLASSIFIED STUDENTS

Applicants for admission to the College of Law, not candidates for a degree, but desiring to pursue special subjects, will be admitted on complying with the admission requirements governing candidates for degrees, or on showing by a special examination that they are qualified to pursue the subjects desired.

COURSE OF STUDY

The course of study is so arranged that the several classes have separate and distinct courses of study throughout. The elementary courses are grouped in the first year, and the specialized courses in the second and third years, the design being to cover the fundamental subjects of the law and to equip the student for the active practice of the profession.

FIRST YEAR

FIRST SEMESTER

<i>Subject</i>	<i>Text</i>	<i>Instructor</i>	<i>Per Week</i>
Contracts	Keener's Cases on Contracts	Dean Gregory	3 hrs
Torts	Cooley on Torts Chase's Cases on Torts	Prof. Hayes	3 hrs
Code Pleading	Iowa Code	Prof. Byers	2 hrs
The Law of Persons	Woodruff's Cases on Domestic Relations and the Law of Persons	Prof. Wilcox	2 hrs

SECOND SEMESTER

Evidence	Jones on Evidence	Prof. Byers	3 hrs
Agency	Wambaugh's Cases on Agency	Prof. Gilbert	2 hrs
Criminal Law and Procedure	McClain's Outlines of Criminal Law and Proced., or Clark's Crim. Law and Beale's Crim. Procedure	Prof. Wilcox	3 hrs
Conveyancing	Tiffany's Modern Real Property	Prof. Hayes	2 hrs
Practice Court No. 1	The Preparation of Pleadings	Prof. Byers	2 hrs

SECOND YEAR

FIRST SEMESTER

Sales	Williston's Cases on Sales	Dean Gregory 2 hrs
Recording Acts, General Assign- ments, &c.	Practical Work	Prof. Byers 1 hr
Bills and Notes	Huffcut's Cases on Negotiable in- struments	Prof. Wilcox 2 hrs
Equity & Equity Pleading	Hutchins & Bunk- er's Cases in Equity Juris- prudence, Select- ed Cases	Prof. Gilbert 3 hrs
Probate Law	Code and Selected Cases	Prof. Gilbert 2 hrs
Practice Court No. 2	Trial of Cases	Prof. Byers
Suretyship (elective)	Ames' Cases	Prof. Gilbert 2 hrs

SECOND SEMESTER

Wills	Chaplin on Wills, Principles with Selected Cases	Dean Gregory 2 hrs
Corporations	Elliott on Private Corporations (3d Ed.) Lectures on Public Cor- porations	Prof. Wilcox 3 hrs
Partnership	Burdick's Cases on Partnership	Prof. Gilbert 2 hrs
Real Property	Tiffany on Modern Real Property	Prof. Hayes 3 hrs
Practice Court No. 3	Trial of Cases	Prof. Byers

THIRD YEAR

FIRST SEMESTER

International Law	Scott's Cases	Dean Gregory 3 hrs
Conflict of Laws	Minor's Conflict of Law and Dyer's Cases on Private International Law	Prof. Hayes 2 hrs
Insurance	Woodruff's Cases on Insurance	Prof. Wilcox 2 hrs
Constitutional Law	McClain's Cases on Constitutional Law	Judge Towner
Practice Court No. 4	Trial of Cases	Prof. Byers

SECOND SEMESTER

Carriers	McClain's Cases	Dean Gregory 3 hrs
Attachment and Garnishment	Code of Iowa Perry's Common Law Pleading	Prof. Hayes 2 hrs
Common Law Pleading		
Justice Practice		
Quasi Contracts	Woodruff's Cases on Quasi Contracts	Prof. Wilcox 2 hrs
Trusts	Selected Cases on Trusts	Prof. Gilbert 3 hrs
Damages	Beale's Cases on Damages	

PRACTICE COURT

For the purpose of affording the student practice in the application of legal principles to statements of fact,

practice courts are conducted for a portion of each year in the first and second year classes and in the first semester of the third year and each student is required to conduct or defend causes in these courts. The courts are presided over by a member of the faculty. The method and rules of procedure follow those of the trial courts, and the student is given an opportunity to draft pleadings and argue cases under these rules. This feature of instruction is an important one in the college. Students are encouraged to form club courts, and the faculty will aid such clubs in every possible way.

COMBINED LIBERAL ARTS AND LAW COURSE

For a statement of the combined Liberal Arts and Law courses see page 109.

INSTRUCTION IN THE COLLEGE OF LIBERAL ARTS

Law students who desire to take work in the College of Liberal Arts in addition to their regular work in the College of Law without being candidates for a degree in the former college are allowed to take such work to an extent not exceeding five hours a week as long as they maintain a good standing in their law studies and as long as the work which they undertake in the College of Liberal Arts is done to the satisfaction of the professors in charge. This privilege is also subject to the discretion of the standing joint committee of the College of Law and the College of Liberal Arts. No additional charge is made for this instruction.

EQUIPMENT

The College of Law has the exclusive occupancy of the second floor and one-half of the main floor in the Old Capitol building.

LAW LIBRARY

The library is in charge of a regular librarian, a graduate in the law and liberal arts and a member of the bar,

with four assistants, who render valuable aid to the students in the prosecution of their work.

The library room is open for the use of students from 8 a. m. to 5:30 p. m., and 7 to 9 p. m., daily.

See "Libraries" on pages 37-40.

THESES

Each candidate for graduation must present to the faculty, on or before the first Monday in April, a thesis upon some legal topic approved by the faculty. Such thesis must be legibly written or printed by typewriter, on paper 8x10½ inches in size, leaving a blank margin of at least one inch at side and at top and bottom. The thesis shall not be less than 1,500 nor more than 2,500 words in length, exclusive of citations of authorities. In citing cases the names of the parties as well as the volume and page of the report must be given. Each thesis must have on the first page thereof the subject of the thesis and the name of the writer.

The character of the thesis will be taken into account in determining whether the candidate is qualified to be recommended for a degree. All theses become the property of the college.

GRADUATION

Three years' study is essential to graduation, at least two of which must have been in a law school and at least the last year of which must have been spent in this college. Before being recommended for graduation the candidate must satisfy the faculty of his proficiency in all the prescribed studies of the course by passing examinations therein, or by certificates as above provided, if the candidate has pursued a portion of his studies in some other law school. Candidates must be of good moral character. Upon being recommended by the faculty, candidates may pass a final examination conducted at Iowa City by the Board of Law Examiners of the state in accordance with the statutes and rules of the Supreme Court regulating admission to the bar (see Acts Twenty-eighth General Assembly, Chapter 11,

Supplement to the Code § 310), but the same is not required as a preliminary to the collegiate degree. Upon complying with the requirements above set out the candidates receive the degree of Bachelor of Laws. To students who pass the examination of the bar examiners, oaths of admission to the bar are administered in connection with their graduation, and they receive the usual diplomas and certificates of admission. Such candidates are also admitted to practice in the federal courts on graduation, the oath being administered at that time. Those who are not twenty-one years of age may pass the examination and receive their diplomas but cannot be admitted to practice until attaining that age.

Special students or those leaving the school in good standing prior to graduation are entitled to certificates showing the number of semesters spent in attendance at this college and the grades attained in the examinations passed.

FORENSIC SOCIETIES

Two forensic societies, The Hammond Law Senate, and The Forum, composed exclusively of students of this college, hold regular weekly meetings, furnishing to their members valuable training in parliamentary law, debating and in the other exercises usually provided for by such organizations.

TUITION—FEES

See pages 67-68.

THE COLLEGE OF MEDICINE

THE COLLEGE OF MEDICINE

FACULTY, INSTRUCTORS AND ASSISTANTS

GEORGE EDWIN MACLEAN, B. A., M. A., B. D., PH. D., LL. D.,
President of the University.

PHILO JUDSON FARNSWORTH, B. A., M. A., M. D.,
Professor Emeritus of Materia Medica and Therapeutics.

JOHN CLINTON SHRADER, M. A., M. D., LL. D.,
Professor Emeritus of Obstetrics, Gynecology, Clinical Gynecology and Diseases of Children.

JAMES RENWICK GUTHRIE, B. S., M. A., M. D.,
Dean of the College of Medicine, and Professor of Obstetrics and Gynecology.

ELBERT WILLIAM ROCKWOOD, B. S., M. A., M. D., PH. D.,
Professor of Chemistry and Toxicology.

JAMES WILLIAM DALBEY, B. S., M. D.,
Professor Emeritus of Ophthalmology.

CHARLES SUMNER CHASE, B. A., B. S., M. A., M. D.,
Professor of Materia Medica and Therapeutics.

WALTER LAWRENCE BIERRING, M. D.,
Professor of Theory and Practice of Medicine and Clinical Medicine; Vice-Dean and Secretary of the Faculty.

WILLIAM ROBERT WHITEIS, B. S., M. S., M. D.,
Professor of Obstetrics.

LEE WALLACE DEAN, B. S., M. S., M. D.,
Professor of Ophthalmology, Otology, Rhinology and Laryngology.

EMIL LOUIS BOERNER, PH. G., Phar. D.,
Professor Emeritus of Pharmacy

WILLIAM JEPSON, B. S., M. D., L. R. C. P. and S.,
Professor of Surgery.

JOHN THOMAS MCCLINTOCK, B. A., M. D.,
Professor of Physiology.

HENRY ALBERT, B. S., M. S., M. D.,
Professor of Pathology and Bacteriology.

- HENRY JAMES PRENTISS, M. E., M. D.,**
Professor of Anatomy.
- ALBERTUS JOSEPH BURGE, B. S., M. S., M. D.,**
Assistant Professor of Surgery.
- ALDEN ROBBINS HOOVER, B. S., M. D.,**
Acting Assistant Professor of Histology and Embryology.
- FRANK THOMAS BREENE, D. D. S., M. D.,**
Lecturer on Dentistry.
- JOHN BLAIR KESSLER, M. D.,**
Lecturer and Clinical Instructor in Dermatology.
- GEORGE EDWARD DECKER, B. S., M. D.,**
Lecturer on Pediatrics.
- JENNINGS PRICE CRAWFORD, M. D.,**
Lecturer on Surgical Technique.
- MILTON REMLEY, B. A., M. A.,**
Lecturer on Medical Jurisprudence.
- JOHN W. KIME, M. D.,**
Lecturer on Tuberculosis.
- WILBER JOHN TEETERS, B. S., M. S., Ph. C.,**
Director of the Pharmaceutical Laboratory.
- ZADA MARY COOPER, Ph. G.,**
Instructor in Pharmacy.
- ANFIN EGDAHL, B. S., M. D.,**
Instructor in Pathology and Bacteriology.
- CLARENCE VAN EPPS, B. S., M. D.,**
Instructor in Physical Diagnosis and Clinical Medicine.
- FREDERIC POMEROY LORD, B. A., M. D.,**
Demonstrator in Anatomy.
- FREDERICK WILLIAM BAILEY, B. S., M. S., M. D.,**
Instructor in Ophthalmology and Otology.
- WALTER HENRY FOX, M. D.,**
Demonstrator in Anatomy.
- RUDOLF ERNST KLEINSORGE, B. S.,**
Assistant Instructor in Physiology.
- CHARLES DELOS POORE, Anal. Chem.,**
Assistant Instructor in Chemistry.
- JOHN JOSEPH LAMBERT, B. Ph., M. S.,**
Assistant Instructor in Histology and Embryology.

- ROE E. REMINGTON, B. A.,
Assistant Instructor in Chemistry.
- FRED ALBERT, JR., B. Ph., M. S.,
Fellow in Internal Medicine.
- MARY KATHRINA HEARD, Ph. C., B. Ph., M. D.,
Scholar in Ophthalmology.
- DAVID DUKE TODD, B. S.,
Scholar in Chemistry.
- RALPH LEONIDAS BYRNES, B. S.,
Senior Assistant in Pathology and Bacteriology.
- FRED SUTTON COOK,
Laboratory Assistant in Pathology.
- IRA NELSON CROW,
Assistant in Histology and Embryology.
- MARION FIDLAR, Graduate Nurse,
Head Nurse, University Hospital.
- CONREID REX HARKEN,
Laboratory Assistant in Pathology and Bacteriology.
- CHARLES SCHUTZ KRAUSE, B. S., M. S., M. D.,
Anaesthetizer Gynecological Clinic.
- JAMES CHARLES MCGREGOR,
Undergraduate Demonstrator in Pharmacology.
- DIEDRICH JANSSEN MEENTS, B. S.,
Assistant in Pathology and Bacteriology.
- WINFRED MICHELL,
Assistant in Histology and Embryology.
- WILLIAM JOHN MORGAN, B. S.,
Storekeeper in Chemistry.
- JOHN THOMAS PADGHAM,
Student Assistant in Physiology.
- ENGELKE JANSSEN RINGENA,
Undergraduate Assistant in Physiology.
- MALCOLM ALLEN ROYAL, B. S.,
Laboratory Assistant in Pathology.
- ANNA M. SLATER,
Matron University Hospital.
- CHARLES H. A. STELLING, M. D.,
House Physician, University Hospital.

KUNO HERBERT STRUCK,

Laboratory Assistant in Pathology.

LOUIS GEORGE STUHLER,

Undergraduate Demonstrator in Pharmacology.

JAMES REED THOMPSON, M. D.,

House Physician, University Hospital.

FREDERICK WILLIAM VALKENAAR,

Junior Assistant in Pathology and Bacteriology.

EVERETT CHAPMAN WARD,

Assistant in Histology and Embryology.

NELSON DAVE WELLS, B. Ph.,

Tutor in Medical Latin.

BERTHA WILKINSON, Graduate Nurse,

Principal of Nurses' Training School.

THE COLLEGE OF MEDICINE

A thorough elementary preparation is required before entering on the course of medical lectures. The University offers a scientific course preparatory to the professional, and it is expected that many will avail themselves of this opportunity. In the branches of medicine there should be a thorough training in principles before the practical portion is begun. For this purpose a careful presentation of the subjects is made by lectures, and the knowledge fixed by recitations and frequent reviews. Ample means of illustration are used, and the materials for demonstration are abundant. In the practical branches abundant clinical material is furnished to illustrate the subjects taught.

Medical, surgical, gynecological, ophthalmological, dermatological, otological, and rhino-laryngological clinics are held each week during the term. Attendance upon these is required of all students, excepting those engaged in laboratory work during clinic hours.

The course of study extends through four years of thirty-six weeks each. The session is divided into two semesters of eighteen weeks, and the semester into two quarters of nine weeks each.

BUILDINGS

With the opening of the year 1904-1905 the College of Medicine occupied for the first time the two splendid stone buildings erected and equipped for its special use. Both buildings are situated in the new medical quadrangle, are of very attractive architecture, and strictly fireproof in construction.

The Hall of Anatomy is 60 by 60 feet, and contains a large amphitheater, recitation room, a laboratory for practical anatomy, an anatomical museum, a smaller room for special research, and private rooms for the professor of anatomy, demonstrators, and assistants.

The hall of histology, physiology, and pathology is 55 by 150 feet in dimensions; the first floor being occupied by the department of physiology, the second by that of histology and embryology, and the third story includes the laboratories of pathology and bacteriology, the pathological museum, and the clinical laboratory.

In this building are also two large amphitheaters, two recitation rooms, laboratories for special research, faculty room, library, and ladies' and gentlemen's waiting rooms.

These buildings are completely equipped with all modern appliances, permitting the most advanced work to be carried on in the several departments represented.

THE PATHOLOGICAL MUSEUM

The museum contains a very valuable and varied collection of preparations, preserved in natural colors and adapted for illustration of the different pathological conditions. The specimens are secured principally from the university clinics and autopsies, by personal visits to the pathological institutes of the large European centers, and as contributions from professional friends. Physicians are earnestly requested to send to the curator of the museum, Professor Henry Albert, any specimens of pathological anatomy. For all such favors credit will be given by labeling the preparations with the name of the donor before placing them in the museum. Acknowledgement will also be made in the annual announcement.

The following interesting contributions have been received from professional friends during the past year:

Tubal pregnancy.....	Dr. E. H. Dwelle, Northwood, Ia.
Carcinoma mammae.....	Dr. E. H. Dwelle, Northwood, Ia.
Carcinoma mammae.....	Dr. J. R. Guthrie, Dubuque, Ia.
Carcinoma following traum-	
tism	Dr. J. C. Davies, Boise, Idaho.
Hypernephroma.....	Drs. Glynn & Decker, Davenport, Ia.
Gangrene of genitalia.....	Dr. J. P. Crawford, Davenport, Ia.
Hypernephroma.....	Dr. Henry Matthey, Davenport, Ia.
Typhoid intestine.....	Dr. Geo. Middleton, Davenport, Ia.
Carcinoma intestine.....	Dr. J. R. Guthrie, Dubuque, Ia.
Dermoid cyst of ovary.....	Dr. J. R. Guthrie, Dubuque, Ia.
Tubal pregnancy.....	Dr. J. C. Hancock, Dubuque, Ia.
Necrotic gall bladder.....	Dr. A. J. Burge, Iowa City, Ia.
Bronchio-pneumonic lung....	Dr. G. E. Decker, Davenport, Ia.
Carcinoma intestine	Dr. J. L. Leech, West Branch, Ia.
Epithelioma of heel.....	Dr. Liggis, Oswego, Kansas.
Suppurative orchitis.....	Dr. F. F. Beveridge, Muscatine, Ia.

- Suppurative kidneys, two- Dr. J. C. Ohlmacher, Independence, Ia.
specimens Ia.
Uterine polypus..... Dr. W. R. Whiteis, Iowa City, Ia.
Pyosalpinx..... Dr. W. R. Whiteis, Iowa City, Ia.
Uterus inversus..... Dr. J. H. Sams, Clarion, Ia.
"..... Dr. J. R. Guthrie, Dubuque, Ia.
Multinocular cystoma of Drs. Matthey & Decker, Davenport, Ia.
ovary Ia.
Gangrenous orchitis..... Dr. C. C. Sackett, Laurel, Neb.
Nephrotic kidneys..... Dr. William Jepson, Sioux City, Ia.
Hematoma of testicle..... Dr. Geo. Kessel, Cresco, Ia.
Nasal tumors..... Dr. J. R. Guthrie, Dubuque, Ia.
Carcinoma of cervix..... Dr. W. L. Bierring, Iowa City, Ia.
Hydatiform mole..... Dr. V. B. Knott, Sioux City, Ia.
Tuberculous peritonitis with organs involved..... Dr. W. Jepson, Sioux City, Ia.
Large white kidneys, two.. Dr. A. J. Burge, Iowa City, Ia.
Dilated heart Dr. Lambach, Davenport, Ia.
Monstrosity..... Dr. J. P. Mullin, Iowa City, Ia.
Monstrosity..... Dr. F. W. Briggs, Iowa City, Ia.
Carcinoma of rectum..... Dr. W. Jepson, Sioux City, Ia.
A number of diseased conditions from cattle and hogs Dr. T. A. Shipley, Cedar Rapids, Ia.
Acute orchitis..... Dr. H. Sigworth & Sons, Anamosa, Ia.
Diphtheritic membrane from trachea and bronchial tube Dr. L. W. Littig, Iowa City, Ia.
Dermoid cysts of ovary.... Dr. J. P. Crawford, Davenport, Ia.
Brain from dementia paralytica Dr. Max Witte, Clarinda, Ia.
Foetus monstrosity..... Drs. Tyler & Beveridge, Muscatine, Ia.
Gangrenous foot..... Dr. V. W. Byrnes, Durant, Ia.
Carcinoma mammary gland Dr. N. A. York, Lisbon, Ia.
Gall stones..... Dr. W. Jepson, Sioux City, Ia.
Placental polypus..... Dr. C. S. Chase, Waterloo, Ia.
A number of specimens for pathologic and histologic work Dr. R. M. Moon, Clarinda, Ia.
Sarcoma, liver of chicken... Mr. Schump, Iowa City, Ia.
Fibroma of appendix..... Dr. R. E. Coniff, Sioux City, Ia.
Fibro-myoma of uterus..... Dr. W. R. Whiteis, Iowa City, Ia.
Diphtheritic membrane..... Dr. J. D. Kessler, Iowa City, Ia.
Fibro-myoma of uterus..... Dr. J. K. Milbourne, Clinton, Ia.
Carcinoma of jaw..... Dr. J. R. Guthrie, Dubuque, Ia.
Osteo-sarcoma of sacrum... Dr. N. A. York, Lisbon, Ia.
Multiple interstitial fibromyomata Dr. N. A. York, Lisbon, Ia.
Blasto-mycotic tissue..... Dr. O. S. Ormsby, Chicago, Ill.
Tonsils and adenoids, several specimens Dr. W. R. Whiteis, Iowa City, Ia.
Typhoid appendix..... Dr. R. L. Whitley, Osage, Ia.
Carcinoma of stomach and liver Drs. Smith & Littig, Iowa City, Ia.
Carcinoma of stomach..... Drs. Bierring & Van Epps, Iowa City, Ia.
Pyelo-nephritis..... Dr. A. J. Burge, Iowa City, Ia.
Fibro-myoma of uterus.... Dr. J. R. Guthrie, Dubuque, Ia.

The department of pathology also desires to acknowledge the receipt of a valuable Von Fleischl Hemoglobonometer from Dr. F. H. Little, of Muscatine, Ia.

REQUIREMENTS FOR ADMISSION

1. Each applicant for admission must present to the secretary of the faculty a satisfactory certificate of good moral character, signed by two physicians of good standing in the state from which he comes.

2. The following classes of applicants may be admitted without examination:

a. Graduates or matriculates of reputable universities or colleges who present diplomas or certificates of honorable dismissal from such universities or colleges, together with a special certificate that they have studied Latin at least one year.

b. Graduates of normal schools established by state authority who present diplomas or certificates of graduation, together with a special certificate that they have studied Latin at least one year.

c. Graduates of accredited or other approved secondary schools who present *thirty* (30) preparatory credits, including at least one year of Latin. *One preparatory credit is defined as the equivalent of one high school study five days a week during a semester at least eighteen weeks in length, on the basis of four studies a day.* These preparatory credits must be properly certified by the superintendent or the principal of the school from which the applicant comes, on a blank form which can be obtained by addressing the president of the University, or the university examiner. This certificate should be sent to the university examiner *as early in the summer as possible.*

3. Applicants who present *twenty-eight* (28) preparatory credits properly certified (as indicated under 2 c) may be admitted without examination, *on condition that they complete their preparation within one year from the date of their admission.* No applicant whose deficiencies exceed *two* (2) preparatory credits will be admitted as a candidate for graduation.

4. In September, 1906, applicants who do not present credentials as described above will be admitted without conditions *only upon passing examinations* in the following preparatory subjects:

a. Latin (one year)	2 credits
b. English and literature	4 credits
c. History (one year)	2 credits
d. Civil government	1 credit
e. Arithmetic	1 credit
f. Algebra, through quadratics	3 credits
g. Plane geometry	2 credits
h. Physics (one year)	2 credits
i. Botany, or some other science	1 credit

5. The applicant who passes examinations in all of the subjects enumerated under 4, except such as stand for a total of *two* (2) preparatory credits, may be admitted *on the conditions stated in paragraph 3.*

6. Applicants who present proper *certificates* covering all or any part of the preparatory studies designated under 4 for examination, may be admitted upon passing examinations in enough *other* preparatory studies to bring the number of their preparatory credits up to at least *twenty-eight* (28), *on the condition stated in paragraph 3.*

7. All applicants who are admitted without Latin will be required to take the one-year course in medical Latin specially provided by the University, the fee being \$5.00 for the course. This course is not a part of the regular course in medicine, but is offered as a convenience for such applicants for admission as have not studied Latin. The class in this course will be organized on Monday, October 1, 1906. Students who take this course are required to pay the fee at the time when they pay the first installment of their regular tuition fee.

8. Students who enter with conditions in *other* preparatory studies than Latin must pass the regular entrance examinations in these studies either in February or in September, 1907.

9. Students entering from other colleges of medicine with advanced standing must present credentials for preparatory work or be examined as stated above.

10. It is urged that any one expecting to enter the

College of Medicine next September send all certificates of preparatory work to the university examiner *as early in the summer as possible, and certainly before September 1*. If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the Secretary of the Board of Regents, room 101, Old Capitol.

ENTRANCE EXAMINATIONS

Any person expecting to enter the College of Medicine next September, should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the president of the University, the secretary of the faculty of the College of Medicine, or the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the programmes given below*. He should present himself at once at the office of the university examiner, who will give him all necessary directions.

For *each separate* examination given at any other time than that announced in the following programmes, a fee of *one dollar* will be charged by the University. For *a series* of examinations covering two or more subjects a fee of *two dollars* will be charged.

PROGRAMMES OF ENTRANCE EXAMINATIONS 353

PROGRAMMES OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

MONDAY, SEPTEMBER 17, TO WEDNESDAY, SEPTEMBER 19, 1906

Arithmetic,	1 credit,	Monday,	8:00 A. M.
Latin,	2 credits,	Monday,	9:30 A. M.
English and English grammar,	2 credits,	Monday,	11:00 A. M.
Literature,		Monday,	1:30 P. M.
General history	2 credits,	Monday,	3:00 P. M.
English history,	1 credit,	Monday,	4:30 P. M.
United States history,	1 credit,	Tuesday,	9:00 A. M.
Civil government	2 credits,	Tuesday,	11:00 A. M.
Plane geometry,	3 credits,	Tuesday,	1:30 P. M.
Algebra,	2 credits,	Tuesday,	4:00 P. M.
Physics,	1 credit,	Wednesday,	3.00 P. M.
Botany,	1 credit,	Tuesday,	8:00 A. M.

SECOND SEMESTER

THURSDAY, JANUARY 31, TO SATURDAY, FEBRUARY 2, 1907

The examinations will be held at the same hours as in the programme above, reading Thursday, Friday and Saturday for Monday, Tuesday and Wednesday, respectively.

All students having deficiencies in the medical work will appear for examination according to the following schedule:

WEDNESDAY, SEPTEMBER 19.

Histology,	8:00 A. M.
Physiology,	10:00 A. M.
Pathology,	10:00 A. M.
Anatomy,	11:00 A. M.
Materia medica,	3:00 P. M.
Chemistry,	4:00 P. M.

COMBINED COURSES

Arrangements have been made with the faculty of the College of Liberal Arts whereby a student may receive credit in one college for work done in another, thereby obtaining the two degrees in six instead of eight years as would be required if each degree were taken independently. These combined courses are especially recommended to all students who intend to enter the profession of medicine.

REQUIREMENTS FOR ADMISSION TO THE COMBINED COURSE

LEADING TO THE DEGREES B. S. AND M. D.

1. Some <i>one</i> foreign language (Latin* preferred, but German or French accepted),	4 credits
2. English and literature,	6 credits
3. History, (may include civics),	2 credits
4. Algebra, through quadratics, theory of exponents, and progressions,	3 credits
5. Plane geometry,	2 credits
6. Electives (<i>additional</i> accreditable work in foreign language, English, history, mathematics or science,)	13 credits
Total,	30 credits

For a detailed statement of the requirements for admission, see pages 88-99.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. S.
IN THE COLLEGE OF LIBERAL ARTS, AND TO THE DEGREE
OF M. D. IN THE COLLEGE OF MEDICINE.

(The requirements for admission to this course pertain to the College of Liberal Arts, *not* to the College of Medicine.)

For an outline of this course see pages 109-111.

* Applicants who do not present at least *one* year of Latin will be required to take the one-year course in Medical Latin at the University.

MASTER OF SCIENCE IN MEDICINE

Students who, upon admission to the University, have presented preparatory work equivalent to the full requirement of the College of Liberal Arts, and who have completed the four years' course in medicine, may, upon the recommendation of the faculty of the College of Medicine, be admitted to the Graduate College as candidates for the degree of Master of Science in Medicine. Such students will be expected to select their major and minor subjects under the advice of the medical faculty. The terms upon which the degree will be granted are the same as those pertaining to the master's degree in general as set out in the announcement of the Graduate College.

ADVANCED STANDING

In all cases those who enter from other schools with advanced standing must comply with the requirements for admission.

Students from other accredited medical colleges who have attended one course of lectures will be admitted to the sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the senior class upon passing an examination in the branches taught during the first, second, and third years. At least 34 weeks of study must have been included in each annual course.

In accordance with the action taken by the Board of Regents, March 10, 1905, four years of residence are required in the College of Medicine, so that advanced standing will not be granted to graduates from literary and scientific colleges. This action is in conformity with the requirements of the Iowa, Minnesota, and other state boards of examiners.

OUTLINE OF THE PLAN OF INSTRUCTION

DEPARTMENT OF ANATOMY

PROFESSOR PRENTISS; DR. LORD, DR. FOX, MR. WOODS, MR. CADWALLADER, MR. SMITH, MR. WOODWORTH

FRESHMAN WORK—The class is divided into three sections to accommodate it to the natural divisions of the body, *i. e.*, head and neck, arm and thorax, leg and abdomen. Taking one section through the year explains the work of the other sections.

Section I on entrance is assigned to the study of the bones of the skull and cervical vertebrae. It receives four demonstrations per week for five weeks, when an examination is held. The professor of anatomy quizzes this section one hour a week on the subject matter covered for the week period, using material on which the student demonstrates his knowledge.

This section is assigned a head and neck in the dissecting room on completing the bone work and four weeks are spent in dissecting the main structures of this part. An examination is held at the end of that period on the practical work. The professor of anatomy quizzes this section one hour a week from a dissected specimen obliging each student to demonstrate his knowledge from the cadaver. Section I again meets a demonstrator for five weeks in the consideration of the osteology and joints of the arm and thorax. The section then spends four weeks dissecting the soft parts of this third of the body.

In the last third of the year section I covers the bones and joints and then the dissection of the lower extremity. Quizzes occur in the same manner as mentioned in the consideration of the head and neck.

LECTURES—During the first semester the professor considers the visceral anatomy in a general way and from the developmental point of view, *viz*:

- I. Digestive tracts,
- II. Diverticula of digestive tracts.

- a.
 - Liver
 - Salivary glands
 - Pancreas.
- b. Respiratory tracts.

- Larynx.
 - Trachea.
 - Bronchi.
 - Lungs.

- III. Ductless glands.
- IV. Genito-urinary tracts.
- V. Angiology.

- Heart, main vessels.
 - arteries, veins.

SECOND SEMESTER—The professor of anatomy considers the brain and spinal cord in a general way. He then lectures in detail on the nerve plexuses and major joints. The year's course of lectures is terminated with a general consideration of the skeleton as a whole—bone composition, etc., etc. The year's course is followed by two examinations held by the professor of anatomy. One is a practical examination on the bones of the entire body, joints, and the musculature, arterial, and nerve systems. The second is a written examination to test the theoretical knowledge of the student.

Section II begins with the bones of the arm and thorax, next leg and abdomen, and lastly, head and neck.

Section III begins with the bones of the leg and abdomen, then takes up head and neck, and lastly, arm and thorax.

THE SOPHOMORE WORK—The sophomore class is divided into three sections to accommodate the natural divisions of the body. Before dissecting, the professor of anatomy meets each section three times a week for a period of four weeks and demonstrates the viscera of the part assigned, viz., head and neck men—the brain; arm and thorax men—the thoracic viscera; leg and abdomen men—abdominal viscera; dilating on the perineum, inguinal and femoral canal and genitalia, both male and female. A practical examination

is held at the end of the period and the three sections pass to the dissecting room where a period of five weeks is spent dissecting in great detail the part assigned including the viscera upon which they have just received demonstrations. As with the freshman class there is a period of demonstrations followed by dissections, the difference being visceral demonstrations instead of bone demonstrations.

LECTURES—The professor of anatomy gives two lectures a week to the sophomore class during the year. The course begins with the consideration of thoracic viscera, including the pure anatomy, regional anatomy and touching on its application to practice and surgery. The abdominal viscera are taken up next, beginning with the digestive tract and finishing with the genito-urinary system. A series of lectures is devoted to the peritoneum considering it from the developmental and comparative point of view, illustrating by models, lower forms of animal life and finally with the human.

Next the spinal cord and brain including the membranes, are considered. The three sections at this period have considered in the demonstration periods the gross anatomy of the brain and can intelligently follow the lectures.

Cranial nerves are now taken up from their origin to their distribution. The sympathetic system follows naturally. Finally the vascula system is lectured upon, stress being laid upon relations, surgical importance, surface markings, etc.

The venous and lymphatic systems terminate the course. The professor of anatomy demonstrates to the class in two sections every week on the lectures and follows this by two quizzes each week on the lectures and demonstrations. Practical and written examinations follow for advanced standing.

THIRD YEAR CLASS—At the opening of the second semester a course in applied anatomy begins. First the scalp is considered and regional anatomy referring to the brain naturally follows. The face and neck come next; then thorax and abdomen. Surgical spaces are considered separately, followed by surgical anatomy of the arteries. The major joints follow, stress being laid upon their relations to the

coverings. Great attention is paid to inguinal, femoral and perineal anatomy.

SENIOR CLASS—An optional course in special regional anatomy will be offered, beginning with the senior class of 1906-1907. The course will relate especially to the surgical anatomy of the ear, nose and throat, and the eye. Other special anatomy will be taught if desired.

NOTE. An anatomical museum is being developed, wherein the students may refer to all manner of prepared specimens. It is more in the nature of an anatomical study room. Specially prepared boxes are provided to hold the head, arm and thorax bones, and leg and abdomen bones. These boxes are issued to the students according to the part which they are studying. The dissection room is provided with a skeleton case containing a mounted skeleton for reference during the dissecting periods. There is also a joint box in the dissecting room where are placed carefully prepared specimens of all the major joints. These specimens are kept pliable by a special fluid which works very successfully.

The material for dissecting, as a result of much experimentation, is kept in a sweet, pliable condition, without the use of cold storage, which is destructive of material, or by fumes. It is always ready for use and at a moment's notice.

DEPARTMENT OF PHYSIOLOGY

PROFESSOR M'CLINTOCK; MR. KLEINSORGE, MR. RINGEN, MR. PADGHAM

The work for the medical student in physiology is graded in the first two years of the medical course, and is so arranged by combining laboratory work with lectures and recitations as to be of the most practical value to students of medicine. It is the purpose of the lectures, which are profusely illustrated, to emphasize the essential and important facts and such accepted theories as may be necessary to explain the physiology of the human organism and as far as possible to show how the normal functions may be changed in pathological conditions.

The laboratory work is so arranged that personal observation and practical application can be made by each

student of the facts and theories which have been emphasized in the didactic work. All the necessary apparatus is provided and sufficient time is spent in both the first and second years to study, by laboratory observation, all that is covered in the didactic work of that year.

Although during the entire course the subject of pathological physiology is treated of along with the normal, in the third year a short course is given in which an especial effort is made to bring a closer association between the normal and abnormal functional activity of the organs of the human body and in which the laws of physiology are applied to pathological conditions.

The courses in physiology are arranged as follows:

1. **ELEMENTARY PHYSIOLOGY**—Lectures, recitations, and demonstrations dealing with the physiology of the plant and animal cell, the fundamental properties of protoplasm, and the "body ingredients." Three hours a week, first quarter, first semester, first year. Professor McCLINTOCK.
2. **CIRCULATORY SYSTEM; RESPIRATORY SYSTEM**—This course includes the lectures, recitations and demonstrations upon the blood, its circulation, upon respiratory system and upon the lymph and lymphatic system. Three hours a week, second quarter, first semester, first year. Professor McCLINTOCK.
3. **DIGESTION AND METABOLISM**—This course includes lectures and recitations upon the subjects of ferments and their action, especially the digestive ferments, the chemistry and mechanics of digestion, the absorption of food-stuffs and upon cellular and body anabolism and katabolism. Three hours a week, first quarter, second semester, first year. Professor McCLINTOCK.
4. **SECRETION AND EXCRETION**—Lectures and recitation three hours a week dealing with both the internal and external secretions, the changes in the secretory gland cells, the nervous mechanism and blood supply of the glands. The course also includes the physiology of the kidney and the skin, the urine, sweat, their origin and excretory substances. Second quarter, second semester, first year. Professor McCLINTOCK.
5. **MUSCLE AND NERVE**—A study of the activity of muscle and nerve tissue under normal and abnormal conditions,

a study of various forms of stimuli and their effect upon tissue, dealing especially with electrical stimulus and the physiological basis of electro-therapy. Lectures, recitations and demonstrations, three hours a week, first quarter, first semester, second year. Professor McCLINTOCK.

6. **THE NERVOUS SYSTEM**—Lectures and recitations upon the brain, spinal cord, cranial and spinal nerves and sympathetic system. Especial attention is given to cerebral localization and spinal pathways, reflexes and the location of possible lesions in the more common nervous diseases. Three hours a week, second quarter, first semester, second year. Professor McCLINTOCK.

7. **PHYSIOLOGY OF SENSATION**—All the senses are studied during this course of lectures and recitations, first quarter, second semester, second year, three hours a week. Professor McCLINTOCK.

8. **PHYSIOLOGY OF REPRODUCTION**—Lectures and recitations, three hours a week, second quarter, second semester, second year. Professor McCLINTOCK.

9. **FIRST YEAR EXPERIMENTAL PHYSIOLOGY**—This is a laboratory course for the students of the first year and is designed to cover in a practical way all of the subjects treated of in the first year didactic work, except the chemistry of digestion, which is taken in the department of chemistry. Second semester, first year. Professor McCLINTOCK, MR. KLEINSORGE, MR. RINGENA, MR. PADGHAM.

10. **SECOND YEAR EXPERIMENTAL PHYSIOLOGY**—A laboratory course of about sixty hours upon muscle and nerve physiology and upon the sensations, physiological optic. For this work the class is divided into small sections and thus each individual is given personal attention by those in charge. Second year. Professor McCLINTOCK, MR. KLEINSORGE, MR. RINGENA, MR. PADGHAM.

11. **PATHOLOGICAL PHYSIOLOGY**—A course of lectures and recitations especially covering the physiology of the diseases of the digestive system, blood, circulation, excretion and the nervous system. Optional laboratory work is given with this course, time to be arranged. Lecture once a week, second semester, third year. Professor McCLINTOCK, MR. KLEINSORGE.

12. **ADVANCED PRACTICAL PHYSIOLOGY**—Elective This

course is open to those who have completed courses 1 to 11, inclusive. A special subject will be assigned to each student for research work. He will be supplied with animals and all needed apparatus for such work as may be selected. Where possible the work may be followed up by direct observations upon patients in the University Hospital. Time to be arranged in the fourth year. Professor MCCLINTOCK, Mr. KLEINSORGE.

DEPARTMENT OF CHEMISTRY AND TOXICOLOGY

PROFESSOR BOCKWOOD; MR. POORE, MR. REMINGTON

The work of the department is conducted in the chemical building of the University. The outfit is ample for demonstrating the general principles of chemistry, as well as its application to medicine. Each student is supplied free of charge with a set of the necessary apparatus, being obliged to pay only for that which is injured or destroyed.

The course in chemistry is designed, first, to give the student a thorough knowledge in fundamental principles, then to assist him in applying these to the problems which he will meet in the practice of his profession. The lectures are fully illustrated by experiments.

9. CHEMISTRY OF THE NON-METALLIC ELEMENTS—Lectures and recitations. Freshman year, first semester. Three hours each week. Mr. POORE.

10a. CHEMISTRY OF THE METALS AND THEIR COMPOUNDS—Lectures and recitations. Freshman year. Second semester, first quarter. Three hours each week. Mr. POORE.

10b. ORGANIC CHEMISTRY—Lectures and recitations. Freshman year, second semester, second quarter. Three hours each week. Mr. POORE.

27 (28a). QUALITATIVE ANALYSIS—A laboratory course. It includes, first, the methods of testing for the metallic poisons; then the common medicinal compounds are studied. The student learns the methods of chemical manipulation and the use of apparatus, and also becomes acquainted with the action of reagents and of the common chemicals upon each other. The course includes the chemical examination of water from a sanitary standpoint, each student making analyses of various wholesome and polluted waters.

Freshman year, first semester, and first half of second semester. Six hours each week. Mr. POORE, Mr. REMINGTON.

28b. **VOLUMETRIC ANALYSIS**—A laboratory course. Volumetric methods of quantitative analysis are especially adapted to the needs of the physician because of the rapidity and ease with which they can be executed. The principal ones are taught and the student is given enough practice to familiarize him with them. Freshman year, second semester, second quarter. Six hours each week. Mr. POORE, Mr. REMINGTON.

59 (60). **PHYSIOLOGICAL CHEMISTRY**—Lectures and recitations. The lectures are in explanation and amplification of the laboratory work. They include the study of the proximate principles of the body and their chemical changes, also foods and digestion, blood, milk, urine, fermentation, and bacterial products. Sophomore year. Two hours each week. Professor ROCKWOOD.

61. **GENERAL PHYSIOLOGICAL CHEMISTRY**—A laboratory course. The proximate principles of the body and food materials are prepared by the student and their properties and chemical changes are studied. Experiments in artificial digestion are made, their products being isolated and examined. The constituents of the blood are tested chemically and spectroscopically. Sophomore year, first semester. Two hours each week. Professor ROCKWOOD, Mr. POORE.

62. **APPLIED PHYSIOLOGICAL CHEMISTRY**—A laboratory course. The modern methods of physiological chemistry are here used in solving problems which arise in the practice of medicine. These include such as the analysis of the gastric juice, quantitative tests being made where they are valuable for diagnostic purposes, the qualitative tests for the abnormal constituents of the urine, with the quantitative determination of such as are of importance, the identification of urinary sediments, of calculi, and of blood stains. Each student makes a complete examination of a large number of each of these, handing in written reports for correction and suggestions. Sophomore year, second semester. Two hours each week. Professor ROCKWOOD, Mr. POORE.

63 (64). **ADVANCED PHYSIOLOGICAL CHEMISTRY**—This is planned for those who wish to continue the work of the pre-

ceding courses. The methods used in research for the isolation and quantitative determination of some of the body constituents are studied in the laboratory. It may be taken as a minor for an advanced degree. Five hours each week. Prerequisites, courses inorganic and organic chemistry with course 59 (60), and 61 (62). Professor Rockwood.

65 (66a). TOXICOLOGY—Lectures and recitations. The physiological and chemical action of the principal poisons is considered as well as their antidotes. The methods of identifying poisons in food, excreta, etc., are explained and illustrated by experiments. Junior year, first semester, and first half of second semester. One hour each week. Professor Rockwood.

49 (50). TOXICOLOGY—An elective laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating them from foods, clothing, and various complex mixtures. The postmortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, general chemistry and qualitative analysis. First or second semester. Six hours a week. Professor Rockwood.

48. CHEMISTRY AS APPLIED TO SANITARY SCIENCE—An elective laboratory course. Included in this are the methods suitable for the physician in testing water, air, milk, and other food materials as to their purity, together with the means of detecting preservatives, adulterants, and substitutes. The student works independently as the course is outlined by the head of the department. Junior year, second semester. Professor Rockwood.

79 (80). GRADUATE WORK—Suitable courses will be outlined to meet the requirements of the individual graduate student desiring to carry on advanced work either as a major or as a minor in a course leading to an advanced degree in the Graduate College of the University. The applicant for such a course must satisfy the head of the department as to his knowledge of general chemistry and as to his fitness for undertaking original investigations. The work will be under direct supervision of the professor in charge of the department. Throughout the year. Time to be arranged. Professor Rockwood.

DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY

PROFESSOR PRENTISS; ACTING ASSISTANT PROFESSOR HOOVER,
MR. LAMBERT, MR. CROW, MR. MIGHELL, MR. WARD..

The department of histology and embryology occupies the entire second floor of the newly completed medical laboratory building. This building has been designed with special reference to the requirements of microscopical work. North and east exposures, ample room, and unobstructed light give ideal conditions for this line of work. The laboratories of this department consist of two large rooms for general class work, a special laboratory equipped for advanced research work, a preparation room containing a complete stock of reagents, human tissues and those of lower animals, appliances such as microtomes for brain sections, paraffin and celloidin work, paraffin bath, electric motors with apparatus for preparing sections of teeth, bone, etc.

In connection with the laboratories are rooms devoted to a library, containing the latest books and journals pertaining to histology and embryology, a museum containing alcoholic specimens, and several thousand microscopic slides of stained and injected adult and embryonic tissues.

Classes are divided into small sections and a sufficient number of demonstrators are employed so that each student may have individual attention.

The illustrative material consists of charts, diagrams, models and blackboard drawings. Each student prepares for himself a complete series of 150 permanent specimens, illustrating the microscopic anatomy of the human body. . .

Each student is provided with a compound microscope and individual locker.

The lecture room is directly off the laboratories. It has a seating capacity of 250 and is provided with the most modern type of stereopticon, charts, and other appliances necessary for illustrated lectures.

The work in histology and embryology is under the direction of the professor of anatomy and is taken up in conjunction with the course in gross anatomy. The study of the subject will continue through the freshman and sophomore years.

FIRST YEAR—During the freshman year the histology of the animal tissues exclusive of the central nervous system and the special senses is covered. This will include the study of the general tissues including the digestive tract and adnexa; the genito-urinary tract, the vascular system, the peripheral nervous system, etc. Each laboratory period is preceded by lectures in the anatomical department illustrating the gross appearances and their relations to the microscopic findings. Two such lectures a week are given by Professor Prentiss. One lecture a week is given by Dr. Hoover on the specialized histological features just preceding the laboratory periods. Two quizzes a week. Dr. HOOVER, Mr. LAMBERT.

Laboratory work, in small sections, four hours a week.

SECOND YEAR—The study of the central nervous system is taken up, paralleling the demonstrations and lectures in the department of anatomy. This will be followed by the histology of the special senses. During the second semester the embryology of the chick, frog, and some mammal will be studied.

Lecture one hour a week and recitation one hour a week. Dr. HOOVER.

It is intended that a short course in histological technique will be given the freshman class, including the fixing, hardening, mounting in celloidin and paraffin, sectioning, staining, etc.

6. ADVANCED WORK FOR A DEGREE IN THE GRADUATE COLLEGE—As a prerequisite to advanced work in this department the student will be required to possess a good working knowledge of both the methods and the subject matter of general histology and embryology. He will be assigned a private laboratory and offered such opportunities as the general laboratory and library afford. The department will supply the necessary materials in the way of tissues and reagents.

Two courses are offered as follows:

I. THE EYE—The histology of its tissues, considered in relation to both their phylogentic and their ontogentic development. The structure and development of the retina will be specially studied.

II. THE LAB—The investigation will proceed along the same lines as in the preceding course.

Throughout the year, hours to be arranged.

**DEPARTMENT OF MATERIA MEDICA AND
THERAPEUTICS**

**PROFESSOR CHASE, PROFESSOR TEETERS, MISS COOPER, MR.
M'GREGOR, MR. WELLS, MR. STUHLER**

1. ORGANIC MATERIA MEDICA—The course is introduced by definitions, and a discussion of routes and modes of administering drugs, dosage, classification of official preparations, and prescription-writing, including the subject of incompatibilities. Following such general topics organic drugs are taken up in a natural order of grouping. Sophomore year, first semester. Two lectures and one recitation each week. **Professor CHASE.**

2. ORGANIC AND INORGANIC MATERIA MEDICA—Drugs of both vegetable and animal as well as inorganic origin are considered. As before they will be grouped with reference to some dominant or characteristic action. Thus are grouped drugs affecting the nervous system, the heart, the circulatory system, respiration, etc. Toward the close of the year a general review is given. Sophomore year, second semester. Two lectures and one recitation each week. **Professor CHASE.**

3. THERAPEUTICS—General therapeutics is presented at the outset by means of such subjects as pneumotherapy, hydrotherapy, balneotherapy, climato-therapy, psychotherapy, hypnotism, suggestion, heat and cold, light and darkness, and other general therapeutic measures more or less mechanical. Junior year, first semester, first quarter. Two lectures and one recitation each week. **Professor CHASE.**

4. THERAPEUTICS—Following the preceding course drugs of a general nature or such as affect the tissues of the body generally, and drugs which affect particular organized systems, are presented separately; for example, those used to stimulate or depress the heart, to modify nutrition, or those which act upon the nervous system. Junior year, first semester, second quarter. Two lectures and one recitation each week. **Professor CHASE.**

5. **THERAPEUTICS**—The preceding course is followed by a discussion of local remedies, that is, remedies acting upon mucus membranes to stimulate their functional activity. Prescription writing will be given careful attention throughout the year, the aim being to illustrate each drug with one or more practical prescriptions and to discuss briefly its mode of administration. Junior year, second semester. Two lectures and one recitation each week. Professor CHASE.

6. **EXPERIMENTAL PHARMACOLOGY**.—During both semesters of the junior year an elaborate, practical laboratory course is given, illustrative of the action of the more important drugs upon inferior animals. Professor CHASE and Mr. MCGREGOR.

7. **THEORY AND PRACTICE OF PHARMACY**—A lecture course. The history of the pharmacopœa will be discussed, also metrology, with special attention to the metric system. The processes used in pharmacy which are of especial interest to the medical student will be considered, such as solution, clarification, percolation, the determination of specific gravity, the preparation of emulsions, suppositories, cachets, tablet-triturations, etc. The prescription from the pharmaceutical standpoint will receive careful attention. Freshman year, second semester. One hour each week. Professor TEETERS.

8. **PHARMACEUTICAL PREPARATIONS**—A laboratory course. The satisfactory production of twenty-five preparations embracing the various classes of the U. S. Pharmacopœia, National Formulary, etc., also work in filling prescriptions illustrative of chemical and pharmaceutical incompatibility is required. Freshman year, second term, second semester, and junior year, first half, second semester, seventy hours. Professor TEETERS, Miss COOPER.

9. **MEDICAL LATIN**—Those who have had but little opportunity to study Latin before entering upon their medical work will be afforded an opportunity in this course, for special drill, with a view to acquiring such knowledge as must be possessed by every accurate prescription-writer. It includes such drill as is outlined in any good treatise on prescription-writing. In the first semester the grammar is

studied with a view to present those principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine. In the second semester the study of the grammar is continued, special attention being given to pharmacopœal nouns and expressions. The prescription is taken up, its definition, its synthesis comprising form, grammatical construction, language, etc., followed by its analysis. A review of the entire work completes the course. Throughout the year. Two hours each week.

10. **ELECTROTHERAPEUTICS AND MASSAGE**—The construction and manipulation of the various forms of apparatus are first considered and the practical workings of batteries and their accessories are demonstrated. The fundamental laws of electricity are given briefly, those of use to the student and practitioner being emphasized. The consideration of the currents in common use follows, with their differences and measurements. This includes galvanic, induced, alternating, and interrupted currents, also the choice of currents for different purposes as the cautery, electrolysis, cataphoresis, etc. The physiological effect of the current, its therapeutical uses, and the electric current in diagnosis are considered. The use of the static machine and X-ray apparatus is taught by actual work and demonstration. The course includes also the principles of massage. Senior year, second semester. Twelve hours.

11. **PRACTICAL THERAPEUTICS**—An elective course. This course consists in the preparation of theses by the students, upon stated cases involving original research and reference to the latest and most approved medical periodicals. Such theses are carefully read and criticized by the head of the department, and are filed in the University library. Opportunity will also be afforded those who wish to do research work in the laboratory of pharmacology. A small expense will be necessary should any wish to avail themselves of such a course, the items of which may be learned by inquiry of the head of the department or of one of the demonstrators. This course is open to any member of the junior or senior classes.

12. **HYGIENE**—A course of lectures upon this subject will be delivered during the senior year, in which will be

discussed all matters pertaining to both public and private hygiene. The subject will be illustrated by means of maps and models showing different styles of machinery for filtration of potable waters—discussing also questions pertaining to their source, etc. Also the results of analyses of potable waters from private wells will be presented with their conclusions, etc. The results of analyses of food-stuffs will be given and all other matters affecting the public health. Senior and junior classes. Second semester.

DEPARTMENT OF PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL, MR. BYRNES, MR. MEENTS, MR. HABKEN, MR. ROYAL, MR. COOK, MR. STUCK, MR. VALKENAAR

The department of pathology and bacteriology occupies the rooms on the third floor of the new laboratory building of the College of Medicine. This floor has two large laboratories for the general work of the department, one large room for the special bacteriological work connected with the Iowa State Board of Health, one photographic room, one large room for the pathological museum with twelve places for students doing special research work or carrying on original investigations, and five small rooms for office, preparation and other special purposes.

All of the laboratories are well-lighted, completely furnished and thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on any kind of investigation in the field of pathology or bacteriology. By reason of special association with the pathological institutes of Vienna, Leipzig, and Munich, the department has come into possession of a most complete and varied collection of diseased tissues and organs for the study of general and special pathological histology. Each student is provided with a special composite topped table, a microscope, a locker, and the necessary staining reagents.

The course in pathology and bacteriology extends through the sophomore, junior and senior years, and is presented by means of lectures, recitations, demonstrations

and laboratory work. The lectures are illustrated by means of drawings, charts, and the Zeiss epidiascope, an instrument for the projection of microscopic slides, lantern slides and opaque objects, such as museum preparations, charts, atlases, illustrations from text books, etc. These objects are projected on a screen many times enlarged. Preparations from the medical museum and fresh specimens derived from post-mortem examinations and the university clinics are also used for illustration. The laboratory work comprises a thorough drill in pathological and bacteriological technique, in the preparation and study of microscopical specimens of the various diseased conditions that occur in the human tissues and of all the more important micro-organisms.

1. **GENERAL PATHOLOGY AND PATHOLOGICAL HISTOLOGY—**A didactic, recitation demonstration and laboratory course including the causation of disease processes, the disturbances in circulation and nutrition, inflammation and the various retrogressive and progressive disturbances of metabolism. The laboratory work will require two hours' work each week from January to June. It comprises the preparation and study of slides illustrating the general pathologic changes that occur in the human tissues. Special attention is given to the drawing of the microscopic specimens. Sophomore year, four hours each week for the first semester, and the first quarter of the second semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES, Mr. STRUCK, Mr. HARKEN.

2. **SURGICAL PATHOLOGY—**A didactic, recitation, demonstration and laboratory course comprising several subjects in surgical pathology but paying most attention to the study of tumors. The extensive material from the university clinics is utilized, which, with the collection in possession of the laboratory, afford an opportunity of studying every variety of tumor formation. Special attention is paid to the differential microscopical diagnosis of the tumors of most clinical interest. Test examinations of unknown specimens are frequently given. Sophomore year, four hours a week during the second semester. Professor ALBERT, Dr. EGDAHL, Mr. ROYAL, Mr. COOK, Mr. MEENTS.

3. **BACTERIOLOGY**—A didactic, recitation and laboratory course, which includes the preparation of artificial culture-media, the cultivation of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different pathogenic micro-organisms as they are related to the various infectious processes.

Special attention is given to the bacteriological analysis of water, and the practical application of bacteriologic technique to hygiene and clinical diagnosis. The didactic lectures include such subjects as cannot properly be pursued in connection with the laboratory work. About seventy different micro-organisms are studied in the laboratory. This department is fortunate in having associated with it, the state board of health bacteriological laboratory, which furnishes a great deal of material that will be utilized for class work. Junior year, seven hours each week during the first semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES, Mr. VALKENAAR, Mr. STBUCK, Mr. ROYAL, Mr. COOK.

4. **SPECIAL PATHOLOGY AND PATHOLOGICAL HISTOLOGY**—This course deals with the pathology of the special tissues and organs of the human body. The lectures are supplemented by demonstrations of gross pathological preparations derived from the clinics, autopsies and the pathological museum. Every fourth lecture will be illustrated by the use of the epidiascope. The laboratory work will comprise the preparation and study of microscopic sections, illustrating as far as possible, the subjects considered in the didactic lectures. Junior year, six hours each week during the second semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES, Mr. STBUCK, Mr. MEENTS.

5. **HAEMATOLOGY**—A didactic, recitation, demonstration and laboratory course devoted to the study of blood. The course will begin with a consideration of the technique necessary for making a blood examination, and the student will receive thorough training in the use of the Thoma-Zeiss and Gower's Hemocytometers, the Von Fleischl and Gower's hemoglobinometers in the Hammerschlog apparatus, the hematocrit, and the various other instruments necessary for a blood analysis. This is followed by a con-

sideration of the general and special pathology of the blood—the student being supplied with coverglass preparations representing the more important pathological conditions of the blood. The abundance of clinical material at the university hospital affords opportunity for thorough training in this subject since every student makes blood examination of every patient under his care. Senior year: one lecture and two hours of laboratory work each week during the first quarter of the first semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES, Mr. ROYAL.

6. CLINICAL MICROSCOPY—A didactic, recitation, demonstration and laboratory course devoted to the study of urine, sputum, stomach contents, vomitus, faeces, milk, dropsical effusions, cyst contents, and animal parasites, also instruction in pathological technique, and such methods of clinical diagnosis as involve the usual microscopical and bacterial analysis. Special attention is given to the rapid diagnosis of fresh material, uterine curettings and the early signs of malignancy. Senior year; one lecture and two hours laboratory work each week during the second quarter of the first semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES, Dr. DECKER, Mr. ROYAL.

7. AUTOPSIES—Post-mortem examinations are made of all available cases. Since no stated time can be set for these demonstrations, members of both junior and senior classes are excused from other work in hand to attend the clinical autopsies.

Students are permitted to assist at post-mortem examinations and are instructed in the methods of making such examinations and of recording proper protocols of the results.

The microscopic findings are studied in each case for comparison with the macroscopic changes. Professor ALBERT, Dr. EGDAHL, Mr. HARKEN, Mr. MEENTS.

8. PATHOLOGICAL TECHNIQUE—An optional laboratory course designed for those who desire to specialize in pathology. The work will include the principles and general methods of the investigation of such material as usually comes to the pathologist for diagnosis. Also the principles and methods involved in research work. This course is also open to students in the Graduate College. Number in

class limited to six. Ten hours (or as much more time as desired) each week during the first quarter of the second semester. Professor ALBERT, Dr. EGDAHL, Mr. HARKEN.

9. BACTERIOLOGICAL TECHNIQUE—A laboratory course designed for advanced students and physicians who desire to specialize in bacteriology. The course is intended principally to prepare the student for such duties as are usually required of health officials. The work will include the technique necessary for every form of bacteriological analysis. The drill in practical work will be thorough and complete—such that the graduates of the course will be competent and reliable bacteriologists. This course is also open to students in the Graduate College. Number in the class limited to six. Twelve hours each week, during the first semester of twenty-four hours each week during the second quarter of the first semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES, Mr. VALKENAAR.

10. ADVANCED WORK FOR A DEGREE IN THE GRADUATE COLLEGE—The department offers opportunities, to candidates for higher degrees, for special work in pathology and bacteriology. The student will be assigned a private laboratory, will have free access to the special laboratory of the department and will be supplied with the tissues and reagents necessary for the work of such a course. Course and time to be arranged. Professor ALBERT.

DEPARTMENT OF THEORY AND PRACTICE OF MEDICINE

PROFESSOR BIERBING; DR. VAN EPPS, DR. DECKER, DR.
McCLINTOCK, MR. ALBERT

The instruction in internal medicine is by lectures, recitations, reviews, and clinics. Special attention is given to the physical examination of patients and analysis of secretions, in order to systematically interpret the clinical findings.

The pathology, pathogenesis, clinical course of disease, and applied therapeutics is regarded as of special importance. By reason of the continued increase in the number of clinical cases it is possible to illustrate most of the dis-

eases treated in the didactic courses. As a considerable number of patients are subsequently referred for operative treatment, the student has the opportunity of seeing the cases considered by more than one department.

The laboratory of the medical clinic is well equipped with all apparatus and reagents necessary to medical diagnosis, and furnished with general and special hand books.

SOPHOMORE YEAR.

1. An introductory course to the study of internal medicine including the principles of physician diagnostic methods. Second semester, one hour each week. Dr. VAN EPPS.

JUNIOR YEAR.

2. PERCUSSION AND AUSCULTATION—A demonstration and recitation course in which the student is trained in inspection, percussion, and auscultation of the normal body, especially the thorax, after which the same methods are applied in examining morbid changes in typical cases, the student being required to carry on the work personally under the supervision of the instructor. Two hours each week during first semester. Dr. VAN EPPS.

3. PHYSICAL DIAGNOSTICS—A demonstration course in which the work in physical examination of patients is continued, and includes the special methods applied in the examination of the abdominal organs and the nervous system. Instruction is also given in the taking of clinical histories. Two hours each week during second semester. Dr. VAN EPPS.

4. THEORY AND PRACTICE OF MEDICINE—A didactic and recitation course. The study of internal medicine begins in the junior year, in the first three months of which there are two lectures and one recitation weekly on some elementary principles of medicine and the more important acute infectious diseases. In the rest of the year there are three recitations weekly on assigned topics among diseases or organs. Professor BIERRING and Dr. VAN EPPS.

5. CLINICAL MEDICINE—Two clinical conferences are held each week at which cases are presented for diagnosis and treatment. In the fourth term the junior students are

assigned to cases in sections to take the history, work out the present condition and write the results. The histories are read in whole or part at the clinic.

SENIOR YEAR.

6. **THEORY AND PRACTICE OF MEDICINE**—A didactic and recitation course, including specially such diseases not considered in the junior year, and not often seen in the clinic. In beginning the study of a disease, a lecture is given on the same, after which topics are assigned for text-book and reference work upon which recitations are held. Frequent use is made of charts, diagrams, pathological specimens, and clinical records from the hospital, to illustrate the different phases of the disease under consideration. Four hours each week. Professor **BIERRING**.

7. **WARD CLASSES**—Sections of the senior class are given special bedside instruction in treatment, two hours each week and daily visits are made with Professor Bierring or Dr. Van Epps to observe the progress of cases and practice diagnostic methods.

8. **CLINICAL MEDICINE**—Two clinics are held each week at which cases are presented for diagnosis and treatment. Patients are assigned to members of the senior class, who take the history, work out the present condition, and write the results, with differential diagnosis and plan of treatment. Each case is to be followed by the student assigned as long as it remains in the hospital. Whenever practicable, methods of treatment such as massage, lavage, etc., are carried out by the student. The histories are read in whole or part at the clinical conferences. Four hours each week throughout the year. Professor **BIERRING**.

9. **PRACTICAL ELECTRO-THERAPEUTICS**—A demonstration course of the use of electricity in the diagnosis and treatment of disease. Advanced students are instructed to apply the different methods of treatment personally and thus obtain a practical knowledge of the same. The student is taught here also the methods of generating X-ray and of employing them in diagnosis and therapeutics. Special work is also carried on in Skiagraphy and its relation to

diagnosis. Three hours each week throughout the year. Dr. McCLINTOCK, Dr. VAN EPPS.

10. NEUROLOGY—A didactic, recitation, and demonstration course on nervous diseases and neurological diagnosis with special reference to the relation of neuro-pathology to clinical neurology. One hour each week throughout the year. Dr. VAN EPPS.

11. PAEDIATRICS—This subject is presented by means of lectures and recitations. Special stress is laid upon diagnosis, particularly of the contagious diseases and those of the gastro-enteric tract. The practical treatment of the common ills of infancy and childhood receive careful attention. First semester, second quarter, twelve hours.

Most of the infants born in the obstetric clinic are artificially fed and each student is required to become thoroughly familiar with this most important branch.

Throughout the year sick children are presented before the general medical clinic. Dr. DECKER.

12. CLINICAL LABORATORY, ADVANCED WORK AND SPECIAL RESEARCH—During the past year the Board has established and generously equipped a clinical laboratory of the department of internal medicine, on the third floor of the general laboratory hall; this, in connection with the clinical laboratory in the University Hospital affords ample opportunities to senior and advanced students to pursue special research in internal medicine.

Each member of the senior class is required to carry on all chemical and microscopic analyses necessary in the patients assigned to him, under the supervision of the head and clinical assistant of the department.

Ample provision has been made for all special apparatus in haematology, cryoscopy, and the estimation of blood pressure.

Candidates for higher degrees and members of the Graduate College may, in the clinical laboratory, carry on special work in internal medicine leading up to such degrees under the supervision of the head of the department. Professor BIERING.

DEPARTMENT OF SURGERY

PROFESSOR JEPSON; DR. BURGE, DR. CRAWFORD, DR. LORD

This subject is graded in the third and fourth years, and is taught by lectures and recitations; by laboratory work in minor surgery, operations on the cadaver, and surgical technique; by ward classes, and by clinics in the university hospital, at which operations in every branch of surgery are open to the class.

1. THE PRINCIPLES OF SURGERY—Hyperæmia; simple inflammation; infective inflammation; the process of repair; gangrene; shock; fever; surgical fevers; septicæmia; pyæmia; erysipelas; hospital gangrene; tetanus; hydrophobia; actinomycosis; anthrax; glanders; snake-bite; tuberculosis; surgical tuberculosis of joints and bones; syphilis. Lectures and recitations, three hours a week, first semester, junior and senior years. Professor JEPSON.

2. THE PRACTICE OF SURGERY AND ORTHOPEDIC SURGERY—Injuries and diseases of regions and systems; fractures and dislocations; deformities, with general principles of pathology and treatment. Lectures and recitations, four hours a week, second semester, junior and senior years. Professor JEPSON.

3. TUMORS—A special course on the classification, description, and pathology of tumors, with general principles of treatment. Lectures and recitations, with laboratory demonstration. One hour a week, first semester, second year. Dr. ALBERT.

4. MINOR SURGERY, BANDAGING, AND DRESSING—Practical instructions, by demonstration and practice, in the various manipulations of minor surgery, including the application of splints and bandages. Two hours a week, first semester, junior years. Drs. BURGE and LORD.

5. OPERATIVE SURGERY—A dissecting-room course, consisting of all the operations in modern surgery, performed by sections of the class, under the supervision of instructors. Two hours a week, second semester, senior year. Drs. BURGE and LORD.

6. OPERATIVE TECHNIQUE—Lectures and practical work on operative procedures, principles of asepsis, antisepsis, and sterilization; preparation of patient and operator, of

instruments and operating rooms; anæsthesia and anæsthetics; hæmostasis; ligatures, sutures; dressing and care of wounds. The technique of kidneys, gall-bladder, stomach, and intestinal surgery, and other operations, such as trephining, tracheotomy and intubation, are illustrated before the class on the lower animals under antiseptic regulations. One hour a week, first semester, junior year. Dr. CRAWFORD.

7. CLINICAL SURGERY—Clinics, at which advanced students are required to assist, and at which operations and manipulations in general surgery are demonstrated to students of third and fourth years, and to other students whose schedule does not prevent attendance. Six to eight hours a week throughout the junior and senior years. Professor JEPSON.

8. WARD CLASSES—Examinations, observation and dressing of patients, in wards of the university hospital, in company with the assistant to the chair of surgery. Class in sections, daily work, first and second semester, senior year. Drs. BURGE and LORD.

9. ANAESTHETICS—During the junior year each member of the class will receive practical instruction in the production of general and local anæsthesia, under the supervision of the anæsthetist of the surgical clinic. Class in sections, one section a week. Junior year.

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

PROFESSOR GUTHRIE; PROFESSOR WHITEIS, DR. KRAUSE
OBSTETRICS

This course embraces a thorough training in diagnosis of pregnancy, the physiology and pathology of pregnancy, diagnosis of presentation and positions, the management of labor, normal and abnormal, measurements of the pelvis, and a complete course upon surgical obstetrics; taught by wet specimens, upon the manikin, and upon patients when practicable. From twelve to twenty patients are confined before the class each year.

The class is divided into sections for study and drill in diagnosis and in operative obstetrics.

1. **DIDACTIC LECTURES**—Three sessions each week upon obstetrics, including a discussion of physiology and pathology, management of gestation, management of labor, normal and abnormal labor, management of puerperium, dystocic, and care of new-born child. Junior year. Professor WHITEIS.

2. **OPERATIVE OBSTETRICS**—Course of six lectures, illustrated by both dry and wet specimens. Senior year. Professor WHITEIS.

3. **COURSE UPON THE MANIKIN** for diagnosis and demonstrating the use of forceps and other mechanical appliances and in obstetrical manipulation, equivalent to one hour each week during the session. Senior year. Professor WHITEIS.

GYNECOLOGY

The instruction in this subject for both junior and senior classes combines didactic lectures, recitations, and demonstrations in both major and minor operative gynecology. The following courses are given:

4. **BEDSIDE CLINIC**—A ward clinic will be held every week, where each student will have an opportunity to examine the patient and to observe both the post-operative condition and the treatment of all operative cases. The merits of each case are discussed and indications for after treatment carefully studied. Students will be drilled in the matter of special diet and hygiene. Senior year.

5. **WARD CLASS** in diagnosis will be given each week throughout the year, at which sections will be instructed in the matter of securing good histories and drilled in taking the same. They will be taught how to conduct an examination and from history and physical condition to form correct diagnosis. Senior year.

6. **DIDACTIC LECTURES**—The first semester is occupied with lectures on the general scope of the subject, methods of examination, etiology, pathology, and general management of gynecological patients. The rest of the course will be devoted to a discussion of special conditions, operative and gynecological technique. Junior and senior years. One lecture a week.

7. **CLINIC** will be held each week, demonstrating meth-

ods of examination and diagnosis, illustrating both major and minor gynecological operations. A constant effort will be made to instruct in modern methods and improved technique. Junior and senior years.

8. GYNECOLOGICAL LANDMARKS—One hour each week during the first semester is devoted to a study of landmarks and cultivation of touch in palpating pelvic viscera.

DEPARTMENT OF OPHTHALMOLOGY, OTOTOLOGY, RHINOLOGY AND LARYNGOLOGY.

PROFESSOR DEAN; DR. BAILEY, DR. HEARD

The department of ophthalmology, otology, rhinology and laryngology occupies the ground floor of the west wing of the university hospital.

The suite of rooms is composed of a large waiting room, a clinical room, a combined operating and treatment room, and a clinical laboratory.

The major operations are performed in the surgical amphitheatre of the hospital.

The clinical room is supplied with enough lights on brackets with the universal movement so that each student has both gas and electric light for his own individual work. The treatment and operating room is well equipped with instruments for operations upon the eye, ear, nose and throat and for their treatment.

Connected with the clinical room is a clinical laboratory in which are microscopical specimens of all the diseases of the eye, ear, nose and throat. There is also an abundance of anatomical sections showing the pathological, the normal, and the anomalous conditions of the eye, ear, nose and throat. These specimens are so prepared and arranged that the student may take them and study them at his leisure. He may diagnose his case in the clinic room and merely step across the hall and examine the gross and microscopical characteristics of the disease present. Examinations of the various secretions and discharges obtained in the clinic are made here.

Bacteriological investigations may also be made in this laboratory. In the new laboratory building there is a clin-

ical laboratory for this department. This laboratory is abundantly supplied with pathological specimens of diseases of the eye, ear, nose and larynx. There is an abundance of normal anatomical specimens of the head, nose, temporal bone, and larynx. These specimens have the soft parts adherent to the bone. They are nicely hardened in formaldehyde and alcohol. The laboratory is well equipped with microscopes, microtomes and instruments and apparatus by means of which the student can make careful dissections of the specimens which he is studying. The laboratory contains also specimens which are already dissected to which he may at any time refer.

Any senior or graduate student wishing to make a special study of these subjects is allowed the use of all these specimens and instruments and is furnished with the anatomical material for dissection with normal and pathological material for mounting specimens, etc., free.

Instruction in this department is given by lectures, recitations, demonstrations, and personal work done in the clinic. There are three kinds of clinics, the out clinic, treatment clinic, and the clinic for major operations. The students attend these clinics only in sections. By this section method of instruction each student receives personal instruction at each session and at the operating clinic they are able to see the operation.

In the out clinic each student is assigned one or more patients which he himself must examine and diagnose and recommend treatment for.

The doctors in charge of the clinic go over each new case with the student who has had charge of it and point out to him such mistakes as he may have made and call his attention to the interesting points in the diagnosis and in differential diagnosis. The endeavor is to teach in a practical way the manipulation of the eye, ear, nose and throat instruments.

To the treatment clinic all those who have been operated on and also those who must have daily attention, come. The students, two at a time, are allowed to come to these treatment clinics and do such part of the treatment as they can, and are given demonstrations in the treatment of such cases as they cannot well handle themselves.

At the operating clinic which is held in the surgical operating room of the hospital are performed only the major operations on the eye, ear, nose and throat. The entire class attends these clinics and are called down in sections of six to witness the operations close at hand. In this way each student during the year gets a close view of all the operations.

Special attention is given to refraction. The department is especially well equipped with apparatus and instruments for refracting the eye. Students in sections are given demonstrations on the ophthalmometer, amblyometer, deviometer, etc., and are given special instruction in the use of the ophthalmoscope and retinoscope. At the out clinic two students are in turn assigned to the refraction cases and must themselves work out the error of refraction and prescribe lenses and fit the frames, having first gone over all the objective and subjective tests. Their work is then gone over by one of the instructors in charge and their attention called to any mistake made. It is the endeavor to get the student to be able to take care of any ordinary refraction case himself. For such students as wish to take special work in refraction a special course is given and in this course all of the finer and more intricate tests are explained including a complete course in the examination of the extra ocular muscles and the pathological conditions as they may exist in the back of the eye.

Three out clinics, three treatment clinics and one operative clinic are held in this department each week, in order that the class may do work in sections.

1. **METHODS OF EXAMINATION AND DIAGNOSIS OF DISEASES OF THE EYE, EAR, NOSE, AND THROAT**—The anatomy and physiology of the eye, ear, nose, and throat. Diseases of the ear, nose and throat; of the eye lids and the eye ball. Senior year, first semester, two hours a week. Professor DEAN, Dr. BAILEY.

2. **DISEASES OF THE EYE AND EAR**—Fundus lesions and relations of diseases of the eye to internal medicine; diseases of the ear, nose and throat. Senior year, second semester; two hours a week. Professor DEAN, Dr. BAILEY.

3. **REFRACTION**—In connection with the out clinic stu-

dents, two at a time, will refract patients. Senior year. Professor DEAN, Dr. BAILEY, Dr. HEARD.

4. **OPERATIONS ON THE EYE, EAR, NOSE AND THROAT—**The class in sections will perform major operations on temporal bones hardened in alcohol and eye operations upon eyes fixed in a manikin. Senior year. Professor DEAN, Dr. BAILEY.

5. **PRACTICAL CLINICAL INSTRUCTION** at the university hospital in the out clinic in diagnosis of diseases of the eye, ear, nose and throat, in methods of examining, in the practical use of the instruments and in the application of remedies operative and medical in sections of not more than twenty each. Senior year, first and second semesters, two hours a week. Professor DEAN, Dr. BAILEY, Dr. HEARD.

6. Clinic once a week major operations on the eye, ear, nose and throat. Senior year, first and second semesters, two or three hours a week. Professor DEAN, Dr. BAILEY.

7. Clinical, microscopical and practical anatomy of the eye, ear, nose and throat. Four hours a week for one semester. Course optional. Number limited to two. Dr. BAILEY.

8. **TREATMENT CLINIC—**Three clinics a week are held and students two at a time attend these clinics and treat patients suffering with diseases of the eye, ear, nose and throat. Senior year, first and second semester. Dr. BAILEY.

9. **LABORATORY WORK—**The class in sections of six are taught to use the ophthalmoscope, retinoscope, ophthalmometer, perimeter, and the essentials of refraction. First quarter, two hours per week. Dr. BAILEY.

10. **GRADUATE WORK—**Courses are offered for students who have their baccalaureate degree and may choose either their major or minor in this department and are allowed to take the senior course during their junior year and then they are prepared to do the special work during their senior year.

Courses for graduate students with M. D. degree are arranged to suit the individual wishes of such students.

The course in advanced refraction includes all special tests. Students are assigned patients whom they meet by special appointment doing the entire case unassisted.

The record is turned in to the instructors who show where in any error lies.

Graduates are allowed to assist in out clinics, doing some of the treatments and aiding in the demonstration of certain cases.

Ward classes are conducted by the professor and the instructors thus making it possible for the students to follow the after treatment carefully.

MEDICAL JURISPRUDENCE

MR. REMLEY

The course is opened with the consideration of the nature and purposes of law, then of laws affecting the practice of medicine. Malpractice is discussed and the liability of the physician to the patient and others, including that of municipalities for the treatment of patients. The questions of legal insanity, expert evidence and expert witnesses, hypothetical cases, causes of death, and post mortem examination follow, and, in conclusion, the subject of state and local boards of health, quarantine regulations, etc. Senior year, first semester, twelve hours.

DERMATOLOGY

DR. KESSLER

The instruction in this department is largely clinical. Didactic lectures and recitations are given during the senior year. Throughout the session one hour and a half a week.

DENTISTRY

DR. BREENE

The lectures on this subject comprise such principles of dental pathology and therapeutics as are essential to the practitioner of medicine. Instruction is given in the application of mechanical appliances for the correction of cleft palate, also in methods of applying retention in fractures of maxilla. Senior year, second semester, five hours.

TEXT-BOOKS AND BOOKS OF REFERENCE

The following are recommended by the faculty:

Medical Dictionary—Gould, Duane, Dunglison.

Anatomy—Cunningham, Huntington on the Peritoneum, Gray, Morris, Gerrish, Treve's Surgical Applied Anatomy.

Physiology—Brubaker, Howell, Hall, American Text Book, Kirk.

General Chemistry—Remson, Bartley, Roscoe and Schorlemmer.

Analytical Chemistry—Rockwood.

Physiological Chemistry—Rockwood, Simon, Herter. Vaughn and Novy.

Urine Analysis—Purdy, Ogden.

Toxicology—Wormley, Taylor.

Surgery—Park, American Text-Book of Surgery, DaCosta, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging, Warren's Surgical Pathology, Senn on Tumors.

Pathology—Colpin, Stengel, Delafield & Prudden, Thayer, American Text-Book, Warren's Surgical Pathology, Kauffman—Spezielle Pathologische Anatomie; Ziegler, Green.

Bacteriology—McFarland, Muir & Ritchie, Crookshank, Park, Williams, Levy & Klemperer, Goadby—The Mycology of the Mouth, Prescott & Winslow—Elements of Water Bacteriology.

Bacteriological Technique—Eyre.

Pathological Technique—Mallory & Wright.

Clinical Diagnosis—Boston, Simon, Wood, Lenhartz, Brooks.

Hæmatology—Ewing, Cabot, DaCosta.

Practice of Medicine—Osler, Anders, Tyson, French, Strumpel, Thompson, Eichorst, American Text-Book of Theory and Practice of Medicine, Albutt's System.

Physical Diagnosis—Cabot, Herrick, Tyson

Medical Diagnosis—Butler, Musser, Vierordt, DaCosta, Flint.

Obstetrics—Williams, American Text-Book of Obstetrics, Dorland, Herst.

Obstetric Surgery—Grandin and Jarmin.

Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe, Dudley.

Materia Medica—White and Wilcox, Potter, Cushny.

Therapeutics—Sollmann, Hare, Wood.

Diseases of Children—Holt, Rotch, Koplik, Starr's American Text-Book, Fruehwald and Westcott.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Elwell.

Histology—Huber, Bailey, Stoehr, Piersol, Schafer Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology and Rhino-Laryngology—Deuch, Bosworth, Kyle, Price-Brown, Buck, McBride, American Text-Book.

Insanity—Compendium of Insanity, Chapin; Mental Diseases, Berkley; Nervous and Mental Diseases, Church and Peterson.

Dermatology—Stelwagon, Crocker.

Hygiene—Notter and Firth, Abbott.

Dietetics—Thompson, Pavy.

Text-books and books of reference can be obtained at an average cost per volume of from \$2.00 to \$5.00, or \$15.00 to \$20.00 per year.

The thorough study of a single text-book in each department is of far greater advantage to the student during his college course than the cursory reading of several. It is therefore advised that a single work in each branch be chosen, using any of the others for reference. The first one of each of the above lists is preferred.

UNIVERSITY HOSPITAL

The university hospital was erected by the University in 1897 at a cost of fifty-five thousand dollars, and ten thousand dollars have recently been expended in remodeling and equipping the institution after the latest and most modern ideas until the University may now with justice boast of the finest and most modernly equipped hospital in

the West. With an administration building thoroughly furnished, with large and commodious wards as well as private rooms, with a clinical amphitheatre that will comfortably seat two hundred or more, and with separate surgical, gynecological, medical, ophthalmological, and laryngological operating rooms, together with a well supplied Free Dispensary, open throughout the year, but little is left to be desired.

CLINICS

The enormous increase in the number of clinical cases treated at the university hospital this year as compared with that of last has made the amount of material so great as to furnish the medical department with a generous abundance of cases of almost every kind and character. Each case is fully utilized as a means of instruction for the benefit of the students. Members of the senior class, under the direction of the professors in charge, make a careful study of each case before it is operated upon. The amount of clinical material is now such that each member of the senior class is required to examine and report upon a number of cases each week in addition to observing all others. The students of the senior class are divided into ward classes of six or eight men and are required to accompany the attending physicians in their rounds and are given opportunities to study the treatments given, to observe the progress of each case, and note the dressings used.

CLINICAL PATIENTS

Medical cases should be referred to Professor W. L. Bierring; surgical cases to Professor Wm. Jepson; gynecological cases to Professor J. R. Guthrie; obstetric cases to Professor W. R. Whiteis; eye, ear, nose, and throat cases to Professor L. W. Dean; dermatological cases to Dr. J. B. Kessler.

RESIDENT PHYSICIANS

Appointments as resident physicians in state and other institutions are made each year from the graduates of the College of Medicine. These are awarded to such of the applicants as the faculty judges best prepared for the post-

tions, the successful candidates being allowed to select, in the order of their rank, from those which are available.

Two resident physicians are appointed for the University Hospital.

For the present year the appointments are: Dr. James Reed Thompson, and Dr. Charles H. A. Stelling, University Hospital; Dr. Paul McConnell Hoffman, Mercy hospital, Davenport; Dr. Roy Merrill Conmey, St. Joseph's hospital, Sioux City.

REQUIREMENTS FOR GRADUATION

1. The candidate must be twenty-one years of age.
 2. He must be known to be of good moral character.
 3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures, shall not be less than thirty-four weeks, and no two of the four courses shall be within the same year.
 4. The candidates must have satisfactorily completed at least four courses in practical anatomy.
 5. The deportment during the term must have been unexceptionable.
 6. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the college.
 7. All members of the freshman class will be examined in general chemistry, pharmacy, histology, physiology, and anatomy at the end of that year. The examination in general chemistry and histology will be final should the student show the required proficiency.
 8. Members of the sophomore class at the end of that year must pass satisfactory examinations in anatomy, histology and embryology, physiology, physiological chemistry, general pathology and materia medica.
 9. Members of the junior class will be given a final examination at the end of the year in applied anatomy, therapeutics, obstetrics, hygiene, special pathology, and bacteriology.
- In the case of failure to pass any of the examinations,

the student must be re-examined before registration at the opening of the next session.

A student failing to receive the required grade on his examination shall be conditioned in that subject and allowed to take the next year's work but must remove the condition by the end of that year. A student failing in two or more subjects in any one year shall not be allowed to register for advanced work.

Students of the senior class who are candidates for the degree of Doctor of Medicine must, before May first, present to the secretary of the faculty certificates of legal age. During the last week of the term, having complied with the other requirements, they must pass a satisfactory examination in practice of medicine, surgery, ophthalmology, gynecology, practical obstetrics, paediatrics, dermatology, otology and rhino-larynology, and in any other subjects taught, if so directed by the faculty at the beginning of the term.

Class standing and recitation marks, together with demonstrators' reports and final examinations, will be taken into consideration when determining the candidate's fitness to receive the medical degree.

TUITION.

Every student, before entering any department of the University is required to pay a matriculation fee of ten dollars. This fee is required the first year only.

The tuition charge in the College of Medicine is twenty-five dollars a semester, and is due at the opening of each semester. A student registered in more than one college of the University is required to pay the tuition of the college having the higher or highest rate of tuition, of the colleges in which he is registered, and is then granted free tuition in any other college of the University. Thus students taking the combined liberal arts and medical course pay the liberal arts tuition of ten dollars a semester while they are taking work in that college only, but as soon as they take up the work in the College of Medicine they are required to pay the regular tuition of the medical college and are granted free tuition in the College of Liberal Arts.

Tuition fees will in no case be remitted.

Students entering the college from other schools with advanced standing will pay ten dollars for dissecting materials used in making up deficiencies in this branch. A student carrying six hours or less of work in the University shall pay half the regular tuition in the college in which he is registered for the time during which he shall carry such work. For all honorably discharged soldiers or sailors of the Spanish-American war, who are taking a full course in this college there is a remission of \$12.50 of each semester's tuition, making a total annual remission of \$25.00.

There are no extra fees whatever, but for each laboratory course in chemistry, bacteriology and practical pharmacy, there is required a deposit of \$3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement is now in effect and will be understood to apply to all students in the college, irrespective of date of matriculation.

Alumni of the college will be admitted to lectures and clinics free of charge, but will pay the usual laboratory fees. Graduates of other medical colleges which are recognized by this college, will, when not candidates for a degree, be admitted to full lecture privileges upon paying the matriculation fee of \$10.00 and a fee of \$10.00 with the usual laboratory fees.

Seats will be assigned by classes in the order of registration at the University.

A certificate of attendance will be issued to each student at the close of the session.

NECESSARY YEARLY EXPENSES

Matriculation fee (first year only)	\$ 10	\$ 10
Tuition fee	50	50
Breakage	1 to	2
Room rent, 9 months	18 to	72
Board, 36 weeks	72 to	108
Books	12 to	20
Total	\$163 to	\$262

ALUMNI LIST

Graduates of this college are requested to acquaint the secretary of the faculty immediately of their postoffice addresses and to inform him promptly of any change of residence.

SPECIMEN PROGRAMME

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The following is a specimen programme:

FRESHMAN YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Medical Latin	Chemistry	Chemistry	Medical Latin	Chemistry	8:00 to 10:00 <i>Anatomical Laboratory</i>
9 to 10	Physiology	Physiology	Histology	<i>Anatomy Recitation Sect. III</i>	<i>Histology Recitation</i>	
10 to 11	<i>Anatomy Recitation Sect. I</i>	Anatomy	10:00 to 12:00 <i>Chemical Laboratory Sect. I</i>	10:00 to 12:00 <i>Chemical Laboratory Sect. I</i>	<i>Physiology Recitation Section</i>	10:00 to 12:00 <i>Histologic'l Laboratory Sect. II</i>
11 to 12	<i>Anatomy Recitation Sect. II</i>				Anatomy <i>1st Sem. Pharmacy 2nd Sem.</i>	10:00 to 12:00 <i>Chemical Laboratory Sect. I</i>
1 to 2	1:00 to 3:00 <i>Physiology'l Laboratory Sect. II</i>	1:00 to 3:00 <i>Physiology'l Laboratory Sect. I</i>	1:00 to 3:00 <i>Histologic'l Laboratory Sect. I</i>	1:00 to 3:00 <i>Histologic'l Laboratory Sect. I</i>	1:00 to 3:00 <i>Histologic'l Laboratory Sect. II</i>	1:00 to 3:00 <i>Anatomical Laboratory Optional</i>
2 to 3	2:00 to 3:00 <i>Physiology Recitation Section</i>	1:00 to 3:00 <i>Chemical Laboratory Sect. II</i>			1:00 to 3:00 <i>Chemical Laboratory Sect. I</i>	
3 to 4	3:15 to 5:15 <i>Chemical Laboratory Sect. II</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	
4 to 5						

SOPHOMORE YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9		General Pathology	Materia Medica	Materia Medica	Pathology Recitation	
9 to 10	<i>Anatomy Recitation</i>	<i>Anatomy Recitation</i>	Anatomy	Physiology	Anatomy	8:00 to 12:00 <i>Physiology'l Laboratory</i>
10 to 11	Physiology	10:00 to 12:00 <i>Physiology'l Laboratory</i>	<i>Physiology'l Chemistry</i>	10:00 to 12:00 <i>Physiology'l Laboratory</i>	<i>Physiology'l Chemistry</i>	
11 to 12			Physiology			
1 to 2	1:00 to 3:15 <i>Physiology'l Chemical Lab. Sect. I</i>	1:00 to 3:00 <i>Physiology'l Laboratory</i>	1:00 to 3:15 <i>Physiology'l Chemical Lab. Sect. II</i>	1:00 to 3:00 <i>Physiology'l Laboratory</i>		1:00 to 3:00 <i>Anatomical Laboratory Optional</i>
2 to 3	1:00 to 3:00 <i>Pathologic'l Lab. Sect. II Jan. to June</i>		1:00 to 3:00 <i>Pathologic'l Lab. Sect. I Jan. to June</i>			
3 to 4	3:15 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:15 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	
4 to 5						

JUNIOR YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Surgery		Practice	Practice <i>Recitation</i>	Practice	Pathology
9 to 10	Practice	9:00 to 11:00 <i>Gynecological Clinic</i>	Thera- peutics	Thera- peutics	9:00 to 11:00 <i>Surg. Tech. 1st Sem.</i>	9:00 to 11:00 <i>Medical Clinic</i>
10 to 11	10:00 to 12:00 Physical Diagnosis Section		Pathology	Obstetrics	10:00 to 11:00 <i>Surgical Anatomy 2nd Sem.</i>	
11 to 12	10:00 to 12:00 <i>Pathologic'l Laboratory Sect. I</i>	Gynecology	Pathology <i>Recitation</i>	Toxicology	Obstetrics	Physical Diagnosis
1 to 2		1:00 to 3:00 <i>Surgical Clinic</i>	1:00 to 3:30 <i>Pathologic'l Laboratory Sect. II Until Jan</i>	1:30 to 3:30 <i>Medical Clinic</i>	1:30 to 2:30 Phys. Diag. Section 1:00 to 3:30 <i>Pathologic'l Laboratory Sect. I Until Jan.</i>	1:00 to 4:00 <i>Pathologic'l Laboratory Sect. II</i>
2 to 3	2:30 to 4:00 <i>Surgical Clinic</i>	3:30 to 4:00 Gynecology	3:30 to 5:30 Pharma- cology	3:00 to 5:30 Pharma- cology	3:30 to 5:30 Pharma- cology	
3 to 4						
4 to 5	4:00 to 5:00 Surgery					

SENIOR YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Surgery	Surgery	Practice	Eye, Ear Nose and Throat	Practice	Eye, Ear Nose and Throat
9 to 10	Practice	9:00 to 11:00 <i>Gynecologi- cal Clinic</i>	Medical Diagnosis	Practice <i>Recitation</i>	Nervous Diseases	9:00 to 11:00 <i>Medical Clinic</i>
10 to 11	10:00 to 12:00 <i>Ward Class in Surgery</i>		Pædiatrics 2nd Term	10:00 to 12:00 Clinical Microscopy Sect. I	10:00 to 12:00 Clinical Microscopy Sect. II	
11 to 12		Gynecology	Practical Obstetrics	10:00 to 11:00 <i>Medical Ward Class</i>	10:00 to 11:00 <i>Medical Ward Class</i>	
1 to 2	1:00 to 2:30 <i>Eye Ear Nose and Throat Clinic Sect I</i>	1:00 to 3:00 <i>Surgical Clinic</i>	1:00 to 2:30 Dermatol- ogy	1:30 to 3:30 <i>Medical Clinic</i>	1:30 to 3:00 <i>Eye, Ear Nose and Throat Clinic Sect. III</i>	
2 to 3	2:30 to 4:00 <i>Surgical Clinic</i>		2:30 to 4:00 <i>Eye, Ear Nose and Throat Clinic Sect. II</i>			
3 to 4	4:00 to 5:00 Surgery			3:30 to 5:30 <i>Operative Clinic Eye & Ear</i>	3:00 to 5:00 <i>Eye & Ear Laboratory</i>	
4 to 5	7:30 to 8:30 <i>Gynecolog'l Diagnosis</i>	4:30 to 5:30 <i>Gynecology Recitation</i>	4:00 to 5:00 Ophthal- mology			

SUMMARY OF ENTIRE COURSE BY HOURS

Giving the actual work required of each student exclusive of examination hours.

SUBJECT.	Number of hours of lectures and recitations.	Number of hours of laboratory work and demonstrations.	Number of hours of clinic.	Total number of hours per subject.
	54			
" Organic	54			
" Qualitative		140		248
Physiology	250	180		430
Anatomy	274	750		1024
Histology and Embryology	80	150		230
Pharmacology, Materia Medica and Therapeutics	158	120		278
Physiological Chemistry	70	82		152
Toxicology	30			30
Pathology	132	80		212
Bacteriology including Hygiene	60	60		120
Theory and Practice.....	240	36	144	420
" Paediatrics	12		20	32
" Physical Diagnosis		60		60
Surgery including Genito-urinary and Orthopaedic surgery..	180	30	780	990
Eye, Ear, Nose, and Throat.....	70	60	212	342
Mental and Nervous Diseases and Electro-Therapeutics.....	48	50	80	178
Dermatology	10		40	50
Medical Jurisprudence	10			10
Totals	1737	1798	1220	4755

THE UNIVERSITY HOSPITAL

OFFICERS OF THE HOSPITAL

LEE WALLACE DEAN, B. S., M. S., M. D.
Director.

CHARLES HENRY ANDREW STELLING, M. D.,
House Physician.

JAMES REED THOMPSON, M. D.,
House Physician.

BERTHA WILKINSON, Graduate Nurse.
*Superintendent of the Hospital and Principal of the Nurses'
Training School.*

MARION FIDLAR, Graduate Nurse,
Head Nurse.

ANNA M. SLATER,
Matron.

THE SCHOOL FOR NURSES

The University conducts in connection with the university hospital and the College of Medicine, a training school for nurses designed to provide the best of instruction and experience for those who desire to enter the profession of nursing. The course extends over three years and provides instruction and experience in handling all kinds of cases. The instruction is given by the regular professors and lecturers of the College of Medicine, and the principal of the training school together with some special lectures by outside authorities on topics of interest and importance to nurses. An information bureau is conducted in connection with the school for the benefit of the graduate nurses. Persons desiring to enter the training school will do well to make application some months before they are ready to enter upon their duty as it may be some time before a vacancy occurs.

Courses of lectures are given each year by the members of the medical faculty as follows:

Ethics in Nursing and Gynecology—PROFESSOR GUTHRIE.

General Surgery and Anaesthesia—PROFESSOR JEPSON.

Obstetrics—PROFESSOR WHITEIS.

Internal Medicine and Infectious Diseases—PROFESSOR BIERRING.

Anatomy—PROFESSOR PRENTISS.

Physiology—PROFESSOR MCCLINTOCK.

Diseases of the Skin—DR. KESSLER.

Materia Medica—PROFESSOR CHASE.

Food Dietetics—PROFESSOR ROCKWOOD.

Bacteriology—PROFESSOR ALBERT.

Eye, Ear, Nose and Throat—PROFESSOR DEAN.

Diseases of Children, Urinalysis—DR. VAN HEPPE.

Bandaging, Fractures, Dislocations, etc.—DR. BURGE.

**THE COLLEGE OF
HOMEOPATHIC MEDICINE**

THE COLLEGE OF HOMEOPATHIC MEDICINE

FACULTY, INSTRUCTORS AND ASSISTANTS

GEORGE EDWIN MACLEAN, M. A., B. D., PH. D., LL. D.,
President of the University.

†JAMES G. GILCHRIST, M. A., M. D.,
Professor of Surgery.

CHARLES H. COGSWELL, M. D.,
Emeritus Professor of Obstetrics and Diseases of Women.

GEORGE ROYAL, M. D.,
Professor of Materia Medica and Therapeutics, Dean of the
Faculty.

BENJAMIN R. JOHNSTON, M. D.,
Professor of Theory and Practice, and Clinical Medicine

FREDERICK J. BECKER, M. D.,
Professor of Obstetrics and Gynecology.

WILLIAM L. BYWATER, M. D., O. et A. Chir.,
Professor of Ophthalmology, Otology, Rhinology, and Laryn-
gology. Vice-Dean and Secretary of the Faculty. Direc-
tor of the Hospital.

*ELBERT W. ROCKWOOD, B. S., M. A., M. D., PH. D.,
Professor of Chemistry and Toxicology.

*JOHN THOMAS MCCLINTOCK, B. A., M. D.,
Professor of Physiology.

*HENRY ALBERT, M. S., M.D.,
Professor of Pathology and Bacteriology.

*HENRY JAMES PRENTISS, M. E., M. D.,
Professor of Anatomy.

THEODORE LINCOLN HAZARD, M. D.,
Lecturer on Pediatrics.

† Died March 22, 1906.

* Members of the faculty of the College of Medicine.

LEORA JOHNSON, M. D.,

Lecturer on Anaesthesia and Clinical Assistant to the Chair of Surgery.

***ALDEN ROBBINS HOOVER, B. S., M. D.,**

Acting Assistant Professor of Histology and Embryology.

***ANFIN EGDAHL, B. S., M. D.,**

Instructor in Pathology and Bacteriology.

***FREDERIC POMEROY LORD, B. A., M. D.,**

Demonstrator in Anatomy.

***WALTER HENRY FOX, M. D.,**

Demonstrator in Anatomy.

***CHARLES DELOS POORE, Anal. Chem.,**

Assistant Instructor in Chemistry.

***RUDOLF ERNST KLEINSORGE, B. S.,**

Assistant Instructor in Physiology.

***JOHN JOSEPH LAMBERT, B. PH., M. S.,**

Assistant Instructor in Histology and Embryology.

***ROE E. REMINGTON, B. A.,**

Assistant Instructor in Chemistry.

ARCHIE B. CLAPP, M. D.,

Assistant to the Chair of Surgery.

JAMES MOORHEAD, M. D.,

Lecturer and Assistant to the Chair of Theory and Practice.

ROSCOE H. VOLLAND, D. D. S., M. D.,

Assistant to the Chair of Materia Medica.

MILTON REMLEY, M. A.,

Lecturer on Medical Jurisprudence.

***ERNEST ALBERT ROGERS, D. D. S., M. D.,**

Lecturer on Dentistry.

ALICE C. BEATLE, Graduate Nurse,

Superintendent of the Hospital and Principal of the Nurses' Training School.

***RALPH LEONIDAS BYRNES, B. S.,**

Senior Assistant in Pathology and Bacteriology.

JOHN WILKINSON COGSWELL, B. S.,

Interne in Hospital.

***FRED SUTTON COOK,**

Laboratory Assistant in Pathology.

***IRA NELSON CROW,**

Assistant in Histology and Embryology.

GARNETT SMITH FELT,
Interne in the Hospital.

*CONREID REX HARKEN,
Laboratory Assistant in Pathology and Bacteriology.

*DIEDRICH JANSSEN MEENTS, B. S.,
Assistant in Pathology and Bacteriology.

*WINFRED MIGHELL,
Assistant in Histology and Embryology.

*JOHN THOMAS PADGHAM,
Student Assistant in Physiology.

*ENGELKE JANSSEN RINGENA,
Undergraduate Assistant in Physiology.

MALCOLM ALLEN ROYAL, B. S.,
Laboratory Assistant in Pathology.

*KUNO HERBERT STRUCK,
Laboratory Assistant in Pathology.

*DAVID DUKE TODD, B. S.,
Scholar in Chemistry.

*FREDERICK WILLIAM VALKENAAR,
Junior Assistant in Pathology and Bacteriology.

*EVERETT CHAPMAN WARD,
Assistant in Histology and Embryology.

NELSON DAVE WELLS, B. PH.,
Tutor in Medical Latin.

THE COLLEGE OF HOMEOPATHIC MEDICINE

The thirtieth annual course of instruction will open on Wednesday, September 19, 1906, at 8 o'clock, A. M. In the afternoon of the same day, at 4 o'clock, the University convocation will be held, which constitutes the formal opening for all the colleges.

The year is divided into two semesters, each divided into two terms of nine weeks each. The commencement exercises and conferring of degrees will occur at 10 o'clock A. M., on June 12, 1907.

The course of study extends over four years, of nine months each. Men and women are admitted on equal terms. The large and well equipped laboratories of the University, the hospital facilities afforded by the union of the college and hospital under one roof, and the opportunity for collateral study in any department of literature or science, furnish facilities for securing an education in medicine not to be surpassed. Furthermore, a diploma from a state university of the first rank has a value that does not attach to that of any private school.

SPECIAL ADVANTAGES OF THIS COLLEGE

1st. In equipment and instruction our laboratories are better than those of any homeopathic college and equal to those of any college in the United States.

2nd. In the libraries of the University and college are about 75,000 volumes at the command of all matriculates.

3rd. The museums of the University afford an education in themselves.

4th. The association of our students with the other colleges of the University broadens the intellectual horizon.

5th. The people of Iowa are partial to the graduates of the State University. Every year the number of desira-

ble locations sent the faculty for our graduates, is more than double the number of graduates.

6th. The cost of living in Iowa City is much less than in larger cities, while the social advantages are greater.

7th. The college being a part of the State University its diploma will never depreciate in value.

8th. The number of students compared with the number of instructors is not so large as to prevent each student from receiving individual attention, not only in the laboratories, but in the quizzes and sub-clinics.

9th. Our post graduate course gives an opportunity for those who have the degree of M. D. to obtain the additional degree of M. S. in Medicine.

10th. The last and most important advantage lies in our combined courses. The public at the present time requires a broad and liberal education of the medical profession. We are prepared to meet this demand. We are prepared to take the graduates of our high schools and after six years of careful and systematic training return them to the public fully equipped.

The faculty most heartily recommends the courses leading to the degrees of B. S. and M. D., to all who contemplate entering the medical profession.

REQUIREMENTS FOR ADMISSION

1. Each applicant for admission must present to the secretary of the faculty a satisfactory certificate of good moral character, signed by two physicians of good standing in the state from which he comes.

2. The following classes of applicants may be admitted without examination:

a. Graduates or matriculates of reputable universities or colleges who present diplomas or certificates of honorable dismissal from such universities or colleges, together with a special certificate that they have studied Latin at least one year.

b. Graduates of normal schools established by state authority who present diplomas or certificates of graduation, together with a special certificate that they have studied Latin at least one year.

c. Graduates of accredited or other approved secondary schools who present *twenty-four* (24) preparatory credits, including at least one year of Latin. *One preparatory credit is defined as the equivalent of one high school study five days a week during a semester at least eighteen weeks in length, on the basis of four studies a day.* The preparatory credits must be properly certified by the superintendent or the principal of the school from which the applicant comes, on a blank form which may be obtained by addressing the President of the University, the secretary of the faculty of the College of Homeopathic Medicine, or the university examiner. This certificate should be sent to the university examiner *as early in the summer as possible.*

3. Applicants who present *twenty-two* (22) preparatory credits properly certified (as indicated under 2 c) may be admitted without examination, *on condition that they complete their preparation within one year from the date of their admission.* No applicant whose deficiencies exceed *two* (2) preparatory credits will be admitted as a candidate for graduation.

4. Applicants who do not present credentials as described above will be admitted without conditions *only upon passing examinations* in the following preparatory subjects:

a. Latin (one year)	2 credits
b. English	2 credits
c. United States history	1 credit
d. Arithmetic	1 credit
e. Algebra, through quadratics	3 credits
f. Plane geometry	2 credits
g. Physics (one year)	2 credits
h. Botany or some other science	1 credit

5. The applicant who passes examination in all of the subjects enumerated under 4, except such as stand for a total of *two* (2) preparatory credits, may be admitted *on the condition stated in paragraph 3.*

Applicants who present proper *certificates* covering all or any part of the preparatory studies designated under 4 for examination, may be admitted upon passing examinations in enough *other* preparatory studies to bring the num-

ber of their preparatory credits up to at least *twenty-two* (22), *on the condition stated in paragraph 3.*

7. All applicants who are admitted without Latin will be required to take the one-year course in medical Latin specially provided by the University, the fee being \$5.00 for the course. This course is not a part of the regular course in homeopathic medicine, but is offered as a convenience for such applicants for admission as have not studied Latin. The class in this course will be organized on Monday, October 1, 1906. Students who take this course are required to pay this fee at the time when they pay the first installment of their regular tuition fee.

8. Students who enter with conditions in *other* preparatory studies than Latin must pass the regular entrance examinations in these studies either in February or September, 1907.

9. Students entering from other colleges of medicine with advanced standing must present credentials for preparatory work or be examined as stated above.

10. It is urged that any one expecting to enter the College of Homeopathic Medicine next September send all certificates of preparatory work to the university examiner *as early in the summer as possible, and certainly before September 1.* If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the dean, or the secretary of the faculty, for signature.

ENTRANCE EXAMINATIONS

Any person expecting to enter the College of Homeopathic Medicine next September should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the president of the University, the secretary of the faculty of the College of Homeopathic Medicine, or the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the programme given below.* He should present himself at once at the office of

the university examiner, who will give him all necessary directions.

For *each separate* examination given at any other time than that announced in the following programmes, a fee of *one dollar* will be charged by the University. For a *series* of examinations covering two or more subjects, a fee of *two dollars* will be charged.

PROGRAMMES OF ENTRANCE EXAMINATIONS.

FIRST SEMESTER

Monday, September 17, to Wednesday, September 19, 1906.

Arithmetic,	1 credit,	Monday,	8:00 a. m.
Latin,	2 credits,	Monday,	9:30 a. m.
English and Eng. grammar	2 credits,	Monday,	11:00 a. m.
United States history,	1 credit	Tuesday	8:00 a. m.
Plane geometry,	2 credits,	Tuesday,	11:00 a. m.
Algebra,	3 credits,	Tuesday,	1:30 p. m.
Physics,	2 credits,	Tuesday,	4:00 p. m.
Botany,	1 credit,	Wednesday,	3:00 p. m.

SECOND SEMESTER

Thursday, January 31, to Saturday, February 2, 1907

The examinations will be held at the same hours as in the programmes above, reading Thursday, Friday and Saturday for Monday, Tuesday and Wednesday, respectively.

All students having deficiencies in their medical work will appear for examination according to the following schedule.

Wednesday, September 19.

Histology,	8:00 a. m.
Physiology,	10:00 a. m.
Pathology,	10:00 a. m.
Anatomy,	11:00 a. m.
Materia medica,	3:00 p. m.
Chemistry,	4:00 p. m.

COMBINED COURSES

Arrangements have been made with the faculty of the College of Liberal Arts whereby a student may receive credit in one college for work done in another, thereby obtaining the two degrees in six instead of eight years as would be required if each degree were taken independently. These combined courses are especially recommended to all students who intend to enter the profession of medicine.

REQUIREMENTS FOR ADMISSION TO THE COMBINED COURSE
LEADING TO THE DEGREES B. S. AND M. D.

- | | |
|--|------------|
| 1. Some <i>one</i> foreign language (Latin* preferred, but German or French accepted), | 4 credits |
| 2. English and literature, | 6 credits |
| 3. History, (may include civics), | 2 credits |
| 4. Algebra, through quadratics, theory of exponents, and progressions, | 3 credits |
| 5. Plane geometry, | 2 credits |
| 6. Electives (<i>additional</i> accreditable work in foreign language, English, history, mathematics or science), | 13 credits |
| | — |
| Total, | 30 credits |

For a detailed statement of the requirements for admission, see the latest announcement of the College of Liberal Arts.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. S.
IN THE COLLEGE OF LIBERAL ARTS, AND TO THE DEGREE
OF M. D. IN THE COLLEGE OF HOMEOPATHIC MEDICINE.

(The requirements for admission to this course pertain to the College of Liberal Arts, *not* to the College of Homeopathic Medicine.)

FIRST YEAR

German or French	5 hours
English	2 hours

*Applicants who do not present at least *one year* of Latin will be required to take the one-year course in Medical Latin at the University.

MASTER OF SCIENCE IN MEDICINE.

Students who, upon admission to the University, have presented preparatory work equivalent to the full requirement of the College of Liberal Arts and who have completed the four years' course in medicine, may, upon the recommendation of the faculty of the College of Homeopathic Medicine, be admitted to the Graduate College as candidates for the degree of master of science in medicine. Such students will be expected to select their major and minor subjects under the advice of the medical faculty. The terms upon which the degree will be granted are the same as those pertaining to the master's degree in general as set out in the announcement of the Graduate College.

PROMOTION

Admission to higher classes is secured only by examination, oral, written, or both, combined with the quiz-record and class standing. A failure to pass in two or more studies will prevent advancement until the conditions are satisfied. A failure in one study will not prevent advancement, but the student must pass a satisfactory examination in that study before the close of the year to which he is promoted. Students presenting credentials from colleges of homeopathic medicine in good standing in the American Institute of Homeopathy, may be admitted to the classes to which such credentials would admit them in the college from which they are issued. The faculty reserves the right to determine the class which any student shall enter, in the case of applicants who have had one or more years in other medical schools.

OUTLINE OF THE PLAN OF INSTRUCTION

DEPARTMENT OF ANATOMY

PROFESSOR PRENTISS; DR. LORD, DR. FOX, MR. WOODS, MR. CADWALLADER, MR. SMITH, MR. WOODWORTH

The courses offered in Anatomy are described on pages 356-359.

DEPARTMENT OF PHYSIOLOGY

PROFESSOR M'CLINTOCK; MR. KLEINSORGE, MR. RINGEN, MR. PADGHAM

The courses offered in Physiology are described on pages 359-362.

DEPARTMENT OF CHEMISTRY AND TOXICOLOGY

PROFESSOR ROCKWOOD; MR. POORE, MR. REMINGTON

The courses offered in Chemistry and Toxicology are described on pages 362-364.

DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY

PROFESSOR PRONTISS; ACTING ASSISTANT PROFESSOR HOOVER, MR. LAMBERT, MR. CROW, MR. MIGHELL, MR. WARD

The courses offered in Histology and Embryology are described on pages 365-367.

DEPARTMENT OF PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL, MR. BYRNES, MR. MEENTS, MR. HARKEN, MR. ROYAL, MR. COOK, MR. STEUCK, MR. VALKENAAR

The courses offered in Pathology and Bacteriology are described on pages 370-374.

MEDICAL JURISPRUDENCE.

MR. REMLEY

The course offered in Medical Jurisprudence is described on page 385.

DENTISTRY

DR. ROGERS

The lectures on this subject comprise such principles of dental pathology and therapeutics as are essential to the practitioner of medicine. Instruction is given in the application of mechanical appliances for the correction of cleft palate, also in methods of applying retention in fractures of maxilla. Junior year, second semester, five hours.

DEPARTMENT OF MATERIA MEDICA
AND THERAPEUTICS

PROFESSOR ROYAL; DR. VOLLAND

The work of the department is graded and extends over the entire course of four years.

1. FRESHMAN YEAR—During the first semester one hour each week is devoted to the study of the organon. During the second semester one hour each week on Institutes and the Principles of homeopathic medicine. Professor ROYAL.

One hour each week during the entire year will be devoted to the study of the characteristic symptoms of the Polycrests. Every effort will be made to impress on the student's mind, by lectures and quizzes, the individuality of each drug presented. Dr. VOLLAND.

An examination will be held in these branches at the end of each semester. Text books: Hahnemann's Organon, Dewey's Essentials of Materia Medica, Nash's Leaders.

2. SOPHOMORE YEAR—Two hours each week during the entire year is devoted to the study of drugs. Special attention is given to their action on the different tissues of the body. Every effort will be made to impress on the student's mind, by lectures and quizzes, the elective affinity of each

drug presented. An examination will be held at the end of the year. Professor ROYAL, Dr. VOLLAND.

3. JUNIOR YEAR—Three hours each week, besides one clinical lecture. The characteristic symptoms of each drug are reviewed and the concomitant symptoms are grouped about these characteristics so as to classify them for therapeutic use. The remedies are divided into two groups, one of which is considered each year. Professor ROYAL.

4. SENIOR YEAR—The seniors will have three hours each week in connection with the juniors, the work being the same as outlined above. At the clinic each senior will be repeatedly called upon to obtain from the patient the history of the case and the symptoms for therapeutic purposes. One additional hour each week will be devoted to the comparison of the symptoms of the different drugs belonging to the same class; during this hour instruction will be given in the use of repertories. Professor ROYAL.

Textbooks: Farrington's Clinical Materia Medica, Boericke's Materia Medica, Cowperthwaite's Materia Medica, Allen's Hand Book, and Lillenthal's Therapeutics.

Three weeks, during each year, will be devoted to the proving of drugs. During these three weeks the junior and senior classes will be excused from all other college work.

DEPARTMENT OF THEORY AND PRACTICE OF MEDICINE AND CLINICAL MEDICINE

PROFESSOR JOHNSTON; DR. MOORHEAD

The work of this department is arranged to cover the ground with which the physician should be familiar in a complete and modern manner.

As noted elsewhere in this announcement a full laboratory course is given during the sophomore year.

It is expected that the major part of the didactic work will be completed in the junior year.

The senior year is thus left free for practical application of the preceding year's studies in the clinics, hospital, dispensary, and out-patient department.

The system of instruction used is a combination of the lecture and recitation methods. A printed syllabus giving

the salient points of the subject under discussion is furnished each student.

The following courses are required:

1. **PHYSICAL DIAGNOSIS**—The principles of physical diagnosis; training in eliciting physical signs. Study of the normal subject.

One hour each week during the sophomore year. Professor JOHNSTON.

2. **DISEASES OF THE CHEST**—Instruction in this subject is given for the most part by the clinical lectures. One hour each week during the junior year is devoted to the study of etiology, symptomatology, diagnosis, and treatment. The senior student is required to make and defend his own diagnosis. His fitness for graduation is determined by his proficiency at the bedside. Professor JOHNSTON.

3. **DISEASES OF THE KIDNEYS AND BLOOD**—Following the work in the laboratory of the sophomore year, there will be a course of lectures during the junior year, and clinical diagnosis with examination of urine and blood in the senior year. Professor JOHNSTON.

4. **INFECTIOUS DISEASES** are taken up during the junior year, special attention being given to differential diagnosis. Students are taken in regular order to examine cases in the vicinity, and so come in direct contact with patients suffering from this important class of diseases. One hour each week. Dr. MOORHEAD.

5. **DISEASES OF THE DIGESTIVE TRACT**—One hour each week during the junior year. Clinical demonstration with practice in lavage and analysis of stomach contents during the senior year. Professor JOHNSTON.

6. **DISEASES OF THE NERVOUS SYSTEM**—A course of lectures illustrated by charts and specimens from the pathological laboratory, supplemented by clinical instruction. One hour each week during the senior year. Professor JOHNSTON.

7. **MEDICAL DIAGNOSIS**—A course reviewing the whole field previously gone over, but approaching the subject from the standpoint of the individual symptom and its possible significance in building up a diagnosis. Last semester, senior year. Professor JOHNSTON.

8. **HYDROTHERAPY AND MANUAL THERAPEUTICS**—A course of lectures upon the principles underlying these allied methods of cure with actual demonstration sufficient to enable the graduate to prescribe them intelligently.

TEXT BOOKS: Cowperthwaite's *Practice*, Arndt's *Practice*, Goodno's *Practice*, Raue's *Special Pathology and Therapeutic Hints*, Talcot's *Mental and Nervous Diseases*, O'Connor's *Nervous Diseases*, Loomis' *Physical Diagnosis*, Bartlett's *Principles of Diagnosis*.

REFERENCE—Osler's *Practice*, Anders' *Practice*.

DERMATOLOGY

One hour a week throughout the senior year will be devoted to the study of the skin, its nature, structure, functions, diseases and treatment, including also drug eruptions and their relation to the pathological features of skin diseases.

The instruction in this branch is both didactic and clinical, patients being assigned to members of the class for examinations, diagnosis, and treatment.

The lectures are illustrated by large colored plates and supplemented by quizzes and recitations. Dr. MOORHEAD.

Text-books: Kippax's *Diseases of the Skin*, Dearborn's *Diseases of the Skin*.

For reference: Piffard's *Diseases of the Skin*, Hyde on *the Skin*, American Text-Book.

DEPARTMENT OF SURGERY

PROFESSOR GILCHRIST; DR. CLAPP, DR. JOHNSON

SOPHOMORES—In this year a comprehensive course of instruction in *minor surgery* will be given, including bandaging, surgical dressings of all kinds, both temporary and permanent; care of instruments, minor surgical operations, and catheterizations. This will be followed by a course of instruction in aseptic technique, and another on surgical anaesthesia. One hour a week, in first semester by Dr. CLAPP, and an additional hour weekly, for the first term, by Dr. JOHNSON.

Text-book: Martin's or Noble's *Minor Surgery*.

In the second semester the class will attend exercises with the junior class, as far as the study of fractures and dislocations is concerned, this subject being of such a character, and of such vast practical value that it is thought best to carry on this instruction through two years. Professor GILCHRIST.

Text-book: Hamilton (or Stinson) on *Fractures and Dislocations*. Attendance on clinics is required in this year.

JUNIORS—A thorough course on emergency surgery will be given in this year, two hours a week, throughout the year. The topics discussed will be such as shock, hemorrhage, effects of heat and cold, contusions and wounds, regional traumatisms, and fractures and dislocations. Professor GILCHRIST.

Text-books as above, and any standard modern textbook.

SENIORS—Two hours a week will be given to surgical pathology, throughout the year, surgical conditions of the various regions of the body, and the discussion of rather special character. The attempt will be made to carry the work along consecutive and systematic lines, giving large attention to therapeutics other than surgical, particularly those homeopathic in character.

Operative Surgery will be taught, didactically, in the first semester, work on the cadaver following in the second semester. The first part of this course will deal more particularly with the principles underlying the surgical art, and later such operative procedures as are commonly made will be done, by the student, on the cadaver. The clinical lectures are designed to be an essential part of this course, for which reason attendance on all clinics, general and special, is obligatory. Professor GILCHRIST.

Text-book: Gilchrist's *Elements of Surgical Pathology*, the *American Text-Book of Surgery*, or any modern textbook on general and operative surgery.

Students in this year will be required to write a thesis, on some assigned topic, and defend the same at meetings of the seminary.

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

PROFESSOR BECKER

In the department of obstetrics and gynecology, didactic lectures and clinical demonstrations are combined with practical work by the student at the bedside and in the operating room, thereby insuring a thorough knowledge in the technique, diagnosis, and treatment in this important department of medicine.

OBSTETRICS

The department of obstetrics is supplied with ample clinical material to afford each student the opportunity of witnessing and assisting at a number of deliveries. The presence of the patients in the hospital several weeks before confinement gives an opportunity to study the conditions of pregnancy, its diagnosis and management.

JUNIOR YEAR—This year is devoted to a review of the anatomy of the pelvis and generative organs and their physiological functions; the physiology of ovulation and gestation; the changes in the maternal organism due to pregnancy; the diagnosis and hygiene of pregnancy, and the management of normal labor.

SENIOR YEAR—During this year special attention is given to the pathological conditions of pregnancy; the causes and management of abortion and premature labor; the diagnosis and management of the various foetal presentations; the methods of performing version; the use of the obstetrical forceps and the management of the puerperium and its pathological conditions.

During the second semester a practical course in the diagnosis and management of the various foetal presentations will be given.

Text-books: Leavitt, *American Text-Book of Obstetrics*, Guernsey, Williams.

GYNECOLOGY

The clinical work in this department is arranged so as to give students the opportunity of examining patients for the purpose of diagnosis, and assisting at operations in the

clinics, thereby acquiring familiarity with the technique of examination, and the treatment of the diseases and injuries peculiar to women.

JUNIOR YEAR—This year is devoted to abnormalities in the development and functions of the sexual organs, including puberty, menstruation with its various pathological conditions, the climacteric, and inflammatory and other diseases usually coming under the head of medical gynecology.

Text-books: Wood, Mintous Uterine Therapeutics, Southwick.

SENIOR YEAR—This year is devoted to the study of the injuries of the genital tract, their results, treatment, and repair, displacements and their correction and neoplasms of the genital tract, their results and treatment, and repair. Professor BECKER.

Text-books: Skene, Dudley, Kelley's *Operative Gynecology*.

PEDIATRICS

DR. HAZARD

Instruction in this department is given by didactic lectures, quizzes and clinics. All the diseases pertaining to pediatrics are given due consideration, but special attention is bestowed upon infant foods and feeding, the diseases of malnutrition and acute exanthematous diseases.

JUNIOR YEAR—In the second semester six lectures are given on the most important part of pediatrics, including nutrition and acute exanthematous diseases, thus preparing the student to better understand the clinical cases in the senior year which have their origin in faulty infantile nutrition or in the sequelae of measles, scarlatina, etc.

SENIOR YEAR—One lecture each week during the year will be given on this subject. The lectures will be supplemented by hospital clinics. Whenever possible, students will be put in charge of out-patients.

Text-books: Fisher, Tooker, Raue.

DEPARTMENT OF OPHTHALMOLOGY, OTOTOLOGY,
RHINOLOGY, AND LARYNGOLOGY

PROFESSOR BYWATER

In this department all diseases of the eye, ear, nose, and throat are considered. For the practical study, there has been recently provided a commodious dark room, well supplied with all the necessary apparatus. Here patients are treated by the students under the supervision of the head of the department or competent assistants. After the patient has been carefully and thoroughly examined in the clinic and the treatment outlined, he is put in charge of a student, who assists in the treatment, watching the progress of the case until the patient is discharged. In this way practical and valuable experience is gained. The student not only becomes familiar with the diseased conditions by being required to make diagnoses, but he also become acquainted with the use of the instruments used in the diagnosis and treatment of cases coming under this department.

The clinics are large, and there is sufficient clinical material, so that the students have an opportunity of seeing operations on a large variety of eye, ear, nose and throat cases.

OPHTHALMOLOGY

SENIORS AND JUNIORS—Didactic lectures and recitations are given on the anatomy and physiology of the eye, diseases of the orbit and lachrymal apparatus, conjunctiva, sclera, cornea, and extrinsic muscles. One hour each week during the first semester.

Lectures and recitations on the internal diseases of the eye, including those of the ciliary body, iris, retina, choroid, optic nerve, lens, and vitreous body. Eye-strains, due to errors of refractions are also considered. One hour each week during the second semester.

SENIORS, JUNIORS AND SOPHOMORES—Clinics two hours each week during the year. Cases are assigned to students for examination, diagnosis and treatment.

OTOLOGY

SENIORS AND JUNIORS—Lectures and recitations on the anatomy and physiology of the ear. All pathological conditions of the external, middle, and internal ears, and of the mastoid process are considered. One hour each week during the first semester.

SENIORS, JUNIORS AND SOPHOMORES—Attendance upon clinics two hours each week is required. This is held in connection with the general eye, ear, nose and throat clinic.

RHINOLOGY AND LARYNGOLOGY

SENIORS AND JUNIORS—Lectures on the anatomy and physiology of the nose, throat, and all accessory sinuses. Consideration of diseases of the nose, naso-pharynx, larynx, frontal sinuses, antrum, ethmoid cells, etc. One hour each week during the second semester.

SENIORS, JUNIORS AND SOPHOMORES—Clinics two hours each week during the year in connection with the general clinic.

SENIORS—Sub-clinic one hour each week during the year.

Use of Ophthalmoscope, Laryngoscope, Rhinoscope, etc.

The seniors are given practical instruction in the use of instruments employed in the diagnosis of pathological conditions of the eye, ear, nose and throat at stated periods throughout the year. The class is divided into sections for this work.

Text-books: *Eye*, Norton, Buffum, MacBride, Noyes; *Ear*, Winslow, Houghton, Hallett, and Dench; *Nose and Throat*, Ivins, Veshlage, Quay, Kyle and Bishop.

CLINICS**SURGICAL CLINIC**

The surgical clinic of this college is open to students of all the classes, but attendance is not obligatory in the freshman year. There is an abundance of clinical material. The general arrangement and clinical system are as follows: Senior Interns at the commencement of the year details two students from the senior class as clinical assistants. One of these retires after one week's service, one after two

weeks. One student is detailed each week thereafter so that each senior student has two consecutive weeks of clinical work. The duties are to assist at all clinics and sub-clinics, and to attend to all dressings in the hospital, under the supervision of the senior interne. This gives unusual facilities for practical instruction.

The surgical clinic is held on Saturday at 9:30 A. M. Professor GILCHRIST.

MEDICAL CLINIC

The medical clinic is open to all classes and regular attendance is required of juniors and seniors.

The first consideration in conducting this clinic is to give the student training in diagnosis and the plan adopted gives the senior student advantages equivalent to a graduate course.

New cases as received are placed in charge of members of the senior class for examination.

A complete diagnosis must be made in writing, after which the patient is examined in open clinic and a criticism of the papers follows:

These papers are preserved and constitute an important factor in determining the student's standing.

Sub-classes under guidance of an instructor visit the homes of out-patients for the study of acute disease.

The treatment prescribed is in accordance with the established principles of homeopathy.

This clinic is held on Wednesday afternoon from two to four o'clock. Professor JOHNSTON.

MATERIA MEDICA CLINIC

The professor of materia medica will hold a clinic every Thursday from 2 to 4 P. M. At this clinic a member of the senior class is requested to elicit from the patient the family and personal history; the sensations; the modalities and all concomitant symptoms. He is then required to arrange these symptoms, point out the characteristic ones and suggest a remedy. The other members of the class are also required to suggest a remedy giving their reasons for so doing from the group of symptoms which has been elic-

ited by their classmate. The professor in charge will then differentiate between the remedies presented by the class, if there be more than one, and will determine the remedy to be administered. **Professor ROYAL.**

GYNECOLOGICAL CLINIC

During the senior and the junior years two hours each week are devoted to clinics at which the students are given special advantages in the examination and diagnosis of the various diseases and injuries of the genital organs of women and assist at the various operations. The addition of this clinic to the course of instruction is of great advantage as the number of students admitted to the same gives all present an opportunity of seeing each step in the work and thereby becoming entirely familiar with the same. **Friday from 1:30 to 3:00 P. M. Professor BECKER.**

OBSTETRICAL CLINIC

By special appointment obstetrical clinics are held to which senior and junior students are admitted. Senior students are given the opportunity of diagnosing the foetal presentations and observing the mechanism and conduct of the various stages of labor. By special arrangement with the board of regents patients wanting a home prior to their confinement and proper medical attendance during the same may avail themselves of this clinic free of charge and at the same time be given all the privacy and comforts of the homes usually provided for this special class of cases.

Anyone desiring information regarding the same is asked to correspond with the professor in charge. **Professor BECKER.**

EYE, EAR, NOSE AND THROAT CLINIC

Clinical instruction is a most important part of the work in this department. Here is where the student "learns to do by doing." He is required to question the patient, eliciting symptoms sufficient for a diagnosis. This made, with the assistance of the other members of the class, he is then required to suggest a remedy and outline the treatment. He is permitted to perform minor operations and give treatments in catarrhal conditions of the eye, ear, nose

and throat under the super vision of the head of the department.

With large clinics, which afford an opportunity to become familiar with many pathological conditions and the instruction of such a practical nature, the student becomes very proficient by the time he has completed his medical course.

Two clinics are held each week during the school year; the one on Tuesday at one o'clock is conducted in the amphitheatre into which all classes of eye, ear, nose and throat cases are received; the other meets on Friday at three o'clock in the basement clinic-room for ear, nose and throat treatments. Sub-clinics will be called at any time for emergency cases. Professor BYWATER.

PEDIATRICS

Children's clinics will be held on Monday. At these clinics the seniors are expected to examine the patients, diagnose the diseases, prescribe the proper remedies and familiarize themselves with the treatment of this class of patients which will constitute a large and important part of their future practice. Dr. HAZARD.

ADMISSION OF PATIENTS

Medical and surgical treatment are free for patients entering the genral clinics. Hospital care is furnished for \$5.00 to \$20.00 per week. An operating-room fee of \$5.00 is required for all surgical cases.

Correspondence with reference to admission to the clinics or hospital should be had with the professor having charge of the particular clinic, or with W. L. Bywater, M. D., the director of the hospital. Arrangements can be made for the reception of a limited number of obstetrical cases *only* between the 15th of September and 15th of April.

DISPENSARY

In connection with the clinic a dispensary has been opened where the clinical assistants, under the direction of

the faculty, prescribe for and visit out-patients, and attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of work, affording at once material for the clinics and practical instruction to the attendant.

REQUIREMENTS FOR GRADUATION

1. The candidate must be not less than twenty-one years of age.
2. Moral character must be known to be unexceptionable.
3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than twenty-eight weeks, and no two of the four courses shall be within the same year.
4. The deportment during the term must have been unexceptionable.
5. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the college.

In case of failure to pass any of the examinations the student may be re-examined at the opening of the next session. If he fail in this second examination he will be allowed to present himself for re-examination only after attendance upon another course of lectures.

Students of the senior class who are candidates for the degree of Doctor of Medicine must, before May first, present to the secretary of the faculty a certificate of legal age and of good moral character, also the receipts from the treasurer of the board of regents showing that all fees have been paid.

TUITION FEES

See pages 67-68.

HOMEOPATHIC ALUMNI ASSOCIATION

The Alumni Association held its thirteenth annual

meeting at the college building, April 1, 1905, at which time the following officers were elected:

President—F. J. Becker, M. D., Iowa City.

Vice President—C. M. Morford, M. D., Toledo.

Secretary—Clara M. Hazard, M. D., Iowa City.

Treasurer—W. H. Woltman, M. D., Iowa City.

Executive Committee—PRESIDENT, SECRETARY and TREASURER.

Alumni are urged to send their names to the secretary to be enrolled as members. A small admission fee is required, the funds so procured to be devoted to the hospital according to a vote taken at the last meeting. Alumni are requested to keep the secretary informed of change of address.

Any further information may be obtained by addressing Geo. E. MacLean, Ph. D., LL. D., President of the University, or W. L. Bywater, M. D., Secretary of the Homeopathic Medical Faculty, at Iowa City, Iowa, or George Royal, M. D., Dean of the College, at Des Moines, Iowa.

COURSES OF INSTRUCTION

First Year

Histology
Physiology
Anatomy
Chemistry—organic and analytic
Organon
Homeopathic pharmacy
Materia medica
Minor surgery

Second Year

Physiology
Anatomy
Physiological chemistry
Pathology
Materia medica
Physical diagnosis
Surgical emergencies
Clinics

Third Year

Toxicology
Rhinology and laryngology
Surgical emergencies—continued
Principles and practice of surgery
Theory and practice of medicine
Bacteriology
Obstetrics
Gynecology
Dermatology
Materia medica
Genito-urinary diseases
Clinics
Pediatrics

Fourth Year

Pediatrics
Ophthalmology and otology
Materia medica and therapeutics
Obstetrics—continued
Gynecology—continued
Principles and practice of surgery—continued
Theory and practice of medicine—continued
Medical jurisprudence
Insanity
Electricity
Venereal diseases
Clinics

TRAINING SCHOOL FOR NURSES

A training school for nurses has been established by the board of regents. The complete course covers three years.

Those wishing to obtain the course of instruction, must make a written application to the Superintendent, upon whose approval they will be received for three months on probation. During the term of probation, the Superintendent will decide as to their practical fitness for the work, and, proving satisfactory, they will be enrolled as "freshman nurses," having first agreed in writing over their signature, to remain in the school three years and to observe the rules and regulations of the hospital.

Applicants must not be under twenty nor over thirty years of age and must have had at least one year of high-school work.

During the first year, they will receive no compensation; for the second year, \$8 per month; and for the third year, \$10 per month. Vacations amounting to one month are given during each year.

COURSE OF TRAINING

The instruction includes:

- Care of ward, ventilation, disinfection, medical and surgical nursing, etc.

- Administration of medicines, and the use of appliances,

- General observation of the sick,

- Keeping of reports and records,

- Methods of observing and recording temperature, pulse and respiration,

- First aid in accidents,

- Bandaging, and use of splints,

- Care of orthopedic cases,

- Care of gynecological patients,

**Obstetrical nursing,
Care of infants,
Chemistry of food,
Modification of diet in diseases,
Invalid cooking.**

They will be given during the last year, a general idea of Hospital and Training School organization, equipment and management.

Aside from their practical work, there will be a regular course of class instruction by the Superintendent, and lectures from the faculty on the following subjects:

Anatomy; eye, ear, nose and throat; anaesthesia; materia medica; gynecology and obstetrics; contagious and infectious diseases; pediatrics.

Examinations will be held at stated periods during the entire course.

Those who complete the three years' course, will receive a diploma signed by the President of the University, the Secretary of the Board of Regents, the Director and the Superintendent of the Hospital.

The graduating exercises occur in connection with those of the University.

For further information, address Alice C. Beatle, Superintendent of the University Homeopathic Hospital.

SPECIMEN PROGRAMME

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Specimen Programme of the College of Homeopathic Medicine

The State University of Iowa

FRESHMAN YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Medical Latin	Chemistry	Chemistry	Medical Latin	Chemistry	8:00 to 10:00 <i>Anatomical Laboratory</i>
9 to 10	Physiology	Physiology	Histology		Histology Recitation	
10 to 11	Anatomy Recitation Sect. I	Anatomy	10:00 to 12:00 <i>Chemical Laboratory Sect. II</i>		Physiology Recitation Section	10:00 to 12:00 <i>Chemical Laboratory Sect. I</i>
11 to 12		Dr. Woltman		Prof. Royal	Anatomy 1st Sem.	
1 to 2	1:00 to 3:00 <i>Physiology's Laboratory Sect. II</i>	1:00 to 3:00 <i>Chemical Laboratory Sect. II</i>			1:00 to 3:00 <i>Histological Laboratory Sect. II</i>	1:00 to 3:00 <i>Anatomical Laboratory Optional</i>
2 to 3						
3 to 4	3:15 to 5:15 <i>Chemical Laboratory Sect. II</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	
4 to 5						

SOPHOMORE YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9		General Pathology	Dr. Woltman	Prof. Royal	Pathology Recitation	8:30 to 9:30 Dr. Clapp
9 to 10	Anatomy Recitation	Anatomy Recitation	Anatomy	Physiology	Anatomy	9:30 to 12:00 Prof. Gilchrist Clinic
10 to 11	Physiology		Physiology's Chemistry		Physiology's Chemistry	10:00 to 12:00 <i>Physiology's Laboratory</i>
11 to 12	Prof. Johnston		Physiology		Dr. Johnson	
1 to 2	1:00 to 3:15 <i>Physiology's Chemical Lab. Sect. I</i>	1:00 to 3:00 <i>Physiology's Laboratory</i>	1:00 to 3:00 <i>Pathology's Lab. Sect. I Jan. to June</i>	1:00 to 3:00 <i>Physiology's Laboratory</i>		1:00 to 3:00 <i>Anatomical Laboratory Optional</i>
2 to 3						
3 to 4	3:15 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	3:15 to 5:30 <i>Anatomical Laboratory</i>	3:00 to 5:00 <i>Anatomical Laboratory</i>	3:00 to 5:30 <i>Anatomical Laboratory</i>	
4 to 5						

JUNIOR YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Prof. Bywater	Prof. Bywater				Pathology
9 to 10	Prof. Johnston	Prof. Becker		Prof. Royal	Prof. Becker	Prof. Gilchrist <i>Clinic</i>
10 to 11	10:00 to 12:00 <i>Pathologic' l Laboratory Sect. I</i>	Prof. Gilchrist	Pathology	Prof. Royal	Surgical Anatomy <i>2nd Sem.</i>	
11 to 12		Dr. Moorehead	Pathology <i>Recitation</i>	Toxicology	Prof. Gilchrist	
1 to 2		1:00 to 3:00 Prof. Bywater <i>Clinic</i>	Prof. Royal and Prof. Johnston	Prof. Royal	1:00 to 3:00 <i>Physiology' l Laboratory Sect. I Until Jan.</i>	
2 to 3			Prof. Johnston <i>Clinic</i>	Prof. Royal <i>Clinic</i>		
3 to 4						
4 to 5			Prof. Royal			

SENIOR YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9						
9 to 10	Prof. Johnston	Prof. Gilchrist	Prof. Bywater	Prof. Royal	Prof. Gilchrist	Prof. Gilchrist <i>Clinic</i>
10 to 11	Prof. Johnston	Dr. Moorehead	Dr. Hazard	Prof. Royal	10:00 to 12:00 Clinical Microscopy <i>Sect. II</i>	
11 to 12	Prof. Gilchrist	Prof. Becker	Prof. Becker	Prof. Becker		
1 to 2	Prof. Bywater	Prof. Bywater <i>Clinic</i>	Prof. Royal and Prof. Johnston	Prof. Royal	Prof. Becker <i>Clinic</i>	
2 to 3	Dr. Hazard <i>Clinic</i>		Prof. Johnston <i>Clinic</i>	Prof. Royal <i>Clinic</i>		
3 to 4					Prof. Bywater <i>Clinic</i>	
4 to 5			Prof. Royal			

**THE COLLEGE OF
DENTISTRY**

COLLEGE OF DENTISTRY

MEMBERS OF THE FACULTY AND OTHER OFFICERS

GEORGE EDWIN MACLEAN, B. A., M. A., B. D., PH. D., LL. D.,
President of the University.

FRANK THOMAS BREENE, D. D. S., M. D.,
Professor of Operative Dentistry and Special Therapeutics.

WILLIAM S. HOSFORD, B. A., D. D. S.,
Professor of Prosthetic Dentistry, Crown and Bridge Work,
and Dean of the Faculty.

ERNEST A. ROGERS, D. D. S., M. D.,
Professor of Regional Anatomy, Clinical Dentistry, and Su-
perintendent of Clinics.

WILLIAM J. BRADY, D. D. S.,
Professor of Orthodontia.

ELBERT WILLIAM ROCKWOOD, B. S., M. A., M. D., PH. D.
Professor of Chemistry and Metallurgy.

CHARLES SUMNER CHASE, B. A., B. S., M. A., M. D.,
Professor of Materia Medica and Therapeutics.

JOHN T. MCCLINTOCK, B. A., M. D.,
Professor of Physiology.

GEORGE V. I. BROWN, M. B., M. D., D. D. S., C. M.,
Professor of Dental Pathology and Oral Surgery.

HENRY ALBERT, B. S., M. S., M. D.,
Professor of Pathology and Bacteriology.

HENRY JAMES PRENTISS, M. E., M. D.,
Professor of Anatomy.

CHARLES CLEVELAND NUTTING, B. A., M. A.,
Lecturer on Comparative Odontography.

CHARLES NOBLE GREGORY, B. A., M. A., LL. B., LL. D.,
Lecturer on Dental Jurisprudence.

HENRY MORROW, JR., D. D. S.,

Lecturer and Demonstrator of Prosthetic Technology.

ROSCOE H. VOLLAND, M. D., D. D. S., M. D.,

Lecturer on Dental Anatomy and Demonstrator of Operative Technic.

ANFIN EGDAHL, B. S., M. D.,

Instructor in Pathology and Bacteriology.

CHARLES L. BRYDEN, E. M., B. S.,

Instructor in Mining and Metallurgy.

FREDERICK P. LORD, B. A., M. D.,

Demonstrator in Anatomy.

WILLIAM EVERETT SPENCE, D. D. S.,

Demonstrator of Prosthetic Dentistry.

WALTER HENRY FOX, M. D.,

Demonstrator in Anatomy.

WILFIE ABRAHAM SUTHERS, D. D. S.,

Clinical Demonstrator of Operative Dentistry.

JOHN VOS, D. D. S.,

Demonstrator of Prosthetic Dentistry.

RUDOLF ERNST KLEINSORGE, B. S.,

Assistant Instructor in Physiology.

CHARLES DELOS POORE, Anal. Chem.,

Assistant Instructor in Chemistry.

JOHN JOSEPH LAMBERT, B. PH., M. S.,

Assistant Instructor in Histology and Embryology.

MELVIN WESLEY MYLER, D. D. S.,

Assistant Demonstrator of Operative Technic.

ROE E. REMINGTON, B. A.,

Assistant Instructor in Chemistry.

HELEN BASCHNAGEL,

Clerk.

RALPH LEONIDAS BYRNES, B. S.

Senior Assistant in Pathology and Bacteriology.

FRED SUTTON COOK,

Laboratory Assistant in Pathology.

IRA NELSON CROW,

Assistant in Histology and Embryology.

PAUL JOHN HANZLIK, PH. G.,
Attendant in Chemistry.

CONREID REX HARKEN,
Laboratory Assistant in Pathology and Bacteriology.

DIEDRICH JANSSEN MEENTS, B. S.,
Assistant in Pathology and Bacteriology.

WINFRED MIGHELL,
Assistant in Histology and Embryology.

WILLIAM JOHN MORGAN, B. S.,
Storekeeper in Chemistry.

JOHN THOMAS PADGHAM,
Student Assistant in Physiology.

ENGELKE JANSSEN RINGENA,
Undergraduate Assistant in Physiology.

MALCOLM ALLEN ROYAL, B. S.,
Laboratory Assistant in Pathology.

KUNO HERBERT STBUCK,
Laboratory Assistant in Pathology.

FREDERICK WILLIAM VALKENAAR,
Junior Assistant in Pathology and Bacteriology.

THE COLLEGE OF DENTISTRY

This college (first called the Dental Department) was organized in response to an earnest request from the profession throughout Iowa, acting through the Iowa State Dental Society. The department was organized in 1881 and held its first session during the year 1882-1883 and has been in continuous operation since. The college enjoys the singular advantage of being a component part of a university and located on the same campus with the other colleges. This gives the student the advantage of instruction in great University departments, the use of the laboratories, libraries and museums of the whole University, as well as a wide acquaintance and close relations with the faculties and students of the several colleges of the institution.

BUILDINGS AND EQUIPMENT

In 1894 a large building was erected for the exclusive use of the college. The building has since been elaborately equipped for dental teaching and is now unsurpassed in convenience.

The college is so equipped as to enable each student to have his own quarters throughout the year. He has his own locker and tables in the laboratories, his seat in the lecture rooms, and his chair and cabinet in the clinic rooms, which are reserved for him at all times.

The building is well lighted throughout, there being no dark rooms, while absence of the smoke and dust of a large city permits full use of the eyes without injury. The laboratories have a large window at each table with lockers beneath for instruments. These laboratories have all the usual appliances including electric lathes for polishing. The lecture rooms are ample and seated with comfortable opera chairs.

The operating rooms are exceptionally well lighted, and provided with Wilkerson and Columbia chairs, each chair having a fountain spittoon with saliva ejector, and

with a Harvard cabinet for instruments. Each chair is also provided with an overhead electric light for dark days or unavoidably late work. This splendid equipment permits of much better and more comfortable work than where the student is compelled to keep all his instruments in a carrying case set upon a small table at the chair.

Porcelain work receives much attention and a number of porcelain furnaces of the latest pattern have been installed. Porcelain baking can be carried on at any time without inconvenience or delay. Such apparatus as electric cautery, root-driers, mouth lamps, and gold annealers are also provided.

A special library of dental and surgical works is maintained in the building for the use of students at all times. This is a department of the general library of which dental students have all the privileges.

The college museum is large and valuable, comprising the celebrated Patrick collection illustrating comparative dental anatomy, with many other rare and valuable specimens pertaining to dentistry. Additions to the museum are being constantly made and our friends are urged to make contributions.

The new laboratories for the study of anatomy, physiology, histology, and bacteriology are now ready and in daily use. These buildings are equipped with every modern appliance for the study of these branches, and are models of convenience and utility.

The method of instruction is by lectures, demonstrations, recitations, and the actual performance of both laboratory and clinical work by the student himself under the supervision of experienced demonstrators. A systematic and thorough preliminary training is given through the technic work of the laboratories, thus fitting the student as far as possible for the practical work of the infirmary. The clinical material is abundant and of exceptional quality, being composed of clean and intelligent patients and affording opportunity for every variety of work, especially of the higher grades.

The College of Dentistry is a member of the National Association of Dental Faculties, and abides by all its rules and regulations. The college also observes all the require-

ments of the National Association of Dental Examiners. The diploma of the College of Dentistry is legally recognized in every state of the United States, and in every foreign country where an American diploma confers any legal rights or privileges.

LENGTH OF COURSE

The course extends through three years of thirty-six weeks each, the years being divided into semesters of eighteen weeks each, and each semester into two quarters of nine weeks. The twenty-sixth annual session will begin September 17, 1906, and ends June 12, 1907.

ADMISSION REQUIREMENTS FOR 1906-1907

Each applicant for admission must present satisfactory evidence of good moral character. Students of both sexes are admitted on equal terms.

Graduates or matriculates of reputable universities or colleges, and graduates of state normal schools or accredited high schools and academies, may be admitted without examination to the first year class on presentation of diplomas or certificates of honorable dismissal.

The minimum preliminary requirement for registration is graduation from an accredited high school of not less than three years, or its full equivalent. Students who have completed the above amount of preparatory work will be admitted without examination on presenting certificates, signed by the superintendent or the principal, and containing specific statements as to the amount of work done in each study. The three years of work must include *twenty-four (24) preparatory credits, a preparatory credit being defined as the equivalent of one high school study five days a week during a semester eighteen weeks in length, on the basis of four studies a day.*

These preparatory credits must be certified by the superintendent or the principal of the school from which the applicant comes, on a blank form which may be obtained by addressing the President of the University or the Dean of the College. This blank should be made out and re-

turned to the University examiner *as early in the summer as possible.*

All other applicants for admission must *pass examinations* in the subjects designated in the programmes of entrance examinations given below, or other subjects which are real equivalents.

Applicants presenting certificates from accredited schools for work not fully meeting the requirements for admission, will be examined in the subjects in which they are deficient.

It is urged that anyone expecting to enter the College of Dentistry next September send all necessary credentials to the University Examiner *as early in the summer as possible, and certainly before September 1st.* If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the dean for signature.

All matters pertaining to the preliminary requirements or examinations are placed in the hands of the University examiner, Mr. H. C. Dorcas, who is also the appointee of the State Superintendent of Public Instruction.

The above requirements for admission are in strict accord with all the rules and regulations of the National Association of Dental Faculties, the National Association of Dental Examiners, and those of the Iowa and Illinois Boards of State Dental Examiners.

ENTRANCE EXAMINATIONS

Any person expecting to enter the College of Dentistry next September, should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the president of the University, the dean of the College of Dentistry, or the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the programmes given below.* He should present himself at once at the office of the university examiner, who will give him all necessary directions.

For *each separate* examination given at any other time than that announced in the following programmes, a fee of *one dollar* will be charged by the University. For a *series* of examinations covering two or more subjects, a fee of *two dollars* will be charged.

PROGRAMMES OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Monday, September 17, to Wednesday, September 19, 1906.

Arithmetic,	1 credit,	Monday,	8:00 a. m.
Latin,	2 credits,	Monday,	9:30 a. m.
English and			
Eng. grammar	2 credits,	Monday	11:00 a. m.
United States			
history	1 credit,	Tuesday,	8:00 a.m.
Plane geometry,	2 credits,	Tuesday,	11:00 a. m.
Algebra,	3 credits,	Tuesday,	1:30 p. m.
Physics,	2 credits,	Tuesday,	4:00 p. m.
Botany,	1 credit,	Wednesday,	3:00 p. m.

SECOND SEMESTER

Thursday, January 31, to Saturday, February 2, 1907.

The examinations will be held at the same hours as in the programmes above, reading Thursday, Friday and Saturday for Monday, Tuesday and Wednesday, respectively.

COMBINED COURSES

Arrangements have been made with the faculty of the College of Liberal Arts whereby a student may receive credit in one college for work done in another, thereby obtaining the two degrees in six years instead of seven as would be required if each degree were taken independently. These combined courses are especially recommended to all students who expect to take up the profession of dentistry.

For a description of this course see pages 110-112.

COMBINED COURSES

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REQUIREMENTS FOR ADMISSION TO THE COMBINED COURSE LEADING TO THE DEGREES B. S. AND D. D. S.

1. Some <i>one</i> foreign language (Latin* preferred, but German or French accepted),	4 credits
2. English and literature,	6 credits
3. History, (may include civics),	2 credits
4. Algebra, through quadratics, theory of exponents, and progressions,	3 credits
5. Plane geometry,	2 credits
6. Electives (<i>additional</i> accreditable work in foreign language, English history, mathematics or science)	13 credits
	—
Total	30 credits

For a detailed statement of the requirements for admission, see pages 88-99.

COMBINED COURSE LEADING TO THE DEGREES OF M. D. AND D. D. S.

Students may arrange to obtain the degrees of Doctor of Medicine and Doctor of Dental Surgery in six years. Details must be arranged by the faculty.

If it is desired to combine the dental work with the work of the College of Medicine it will be necessary for the student to present thirty preparatory credits to meet the requirements of that college. If on the other hand the student elects to combine his dental work with the work of the College of Homeopathic Medicine he will be required to present the requirements of that college, viz., twenty-four credits. Students contemplating taking either of these courses should consult the announcements of the colleges of medicine.

REQUIREMENTS FOR GRADUATION FOR SESSION OF 1906-1907

The candidate for graduation must be of legal age and of good moral character; must present to the faculty a satis-

factory case of artificial dentistry; also the required clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this college.

The deportment during the course must have been unexceptionable, and attendance upon all lectures, clinics, and other instruction in the course must have been in accord with the requirements of the college.

Members of the senior class must notify the dean of the faculty in writing during the second week of April of their intention of becoming applicants for the degree of Doctor of Dental Surgery. Every senior must be present at commencement exercises unless excused by the President of the University.

Attendance on any course of lectures in other recognized dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this college. Graduates of medical colleges will be required to attend two full years of instruction in this college, including all laboratory and clinical requirements, and all lectures, before applying for graduation.

Having complied with the requirements of this college the faculty will recommend the candidate to the board of regents as entitled to receive the degree of Doctor of Dental Surgery.

SCHEDULE OF STUDIES

A tentative curriculum for the three year course of instruction is here given, subject to modification as may seem expedient.

FRESHMAN YEAR

Anatomy	Materia medica (2d semester)
Dissection	
Physiology	Medical Latin (optional)
Chemistry (2d semester)	Dental anatomy
Chemical laboratory (2d semester)	Prosthetic technic
Histology	Operative technic (1st semester)
Histological laboratory	

JUNIOR YEAR

Anatomy	Operative technic (1st semester)
Dissection (1st semester)	
Physiology	Operative dentistry
Materia medica (1st semester)	Prosthetic dentistry
Special therapeutics (2d semester)	Prosthetic technic (1st semester)
	Porcelain technic
Metallurgy (1st semester)	Orthodontia technic
Metallurgical laboratory (1st semester)	Infirmery (2d semester)
General Pathology (2d semester)	Bacteriology (1st semester)

SENIOR YEAR

Operative dentistry	Comparative odontography (2d semester)
Prosthetic dentistry	
Clinical dentistry	Physical diagnosis (2d semester)
Orthodontia	
Regional anatomy	Hygiene
Special therapeutics	Dental jurisprudence (2d semester)
Oral pathology	
Oral surgery	Special lectures
	Infirmery

All students will be required to pass examinations on the studies pursued in their respective courses before leaving the University at the close of the year. In case of failure to pass any of these examinations the student must be re-examined before registration at the opening of the next session. A failure in two or more branches at the September examination will debar the student from admission to a higher class.

All students having deficiencies in their dental work will appear for examination according to the following schedule:

TUESDAY, SEPTEMBER 18

Dental anatomy, 9 a. m. Dental pathology, 2 p. m.
Operative dentistry, 10 a. m. Orthodontia, 3 p. m.
Prosthetic dentistry, 11 a. m.

WEDNESDAY, SEPTEMBER 19

Histology, 8 a. m.	Anatomy, 11 a. m.
Physiology, 10 a. m.	Materia medica, 3 p. m.
Pathology and bacteriology, 10 a. m.	Chemistry and metallurgy, 4 p. m.

OUTLINE OF THE PLAN OF INSTRUCTION

DEPARTMENT OF OPERATIVE DENTISTRY AND DENTAL THERAPEUTICS

PROFESSOR BREENE; DR. ROGERS, DR. VOLLAND

The course in operative dentistry, including operative technic and dental anatomy, extends through the freshman, junior and senior years. The clinical facilities for instruction in this department give the student an opportunity to receive thorough drill of a practical kind that can be utilized in the practice of dentistry.

To restore teeth which have become diseased or deformed by formative chemical or mechanical means to a normal or functional condition is the ideal of operative dentistry.

To facilitate the bringing of the student to the point of recognizing and accomplishing this ideal of dental art, instruction in the detail of all operations upon the teeth is given in the technical laboratory, infirmary, and by lectures.

The course in operative technic is supplementary to lectures and laboratory work in dental anatomy of the freshman year. It is a preliminary training for clinical dentistry procedure. Every effort is put forth by the instructors in charge to make this work practical.

Each student carves from bone or celluloid blocks a number of teeth which are mounted in dummy jaws. Cavities of decay are outlined on these teeth. The student is required to prepare cavities for insertion of fillings, following the modern methods of cavity preparation.

Fillings of gold, amalgam, cement and guttapercha, also inlays of gold and porcelain, are introduced in cavities

formed. Special attention is given to restoration of type and contact in relation to approximation and apposition. Thus the objective results (functional improvement) are fully demonstrated.

OUTLINE OF LECTURE COURSE

History of dentistry, care of patients, examination of teeth, use and disinfection of instruments and other appliances, removal of deposits and cleaning of the teeth, general hygiene of the mouth, methods of securing separation of teeth, preparation of cavities, selection and characteristics of filling materials, inlays—gold and porcelain.

Junior and senior years, first and second semester, three hours each week. Professor BREENE.

For information as to the plan of instruction in dental therapeutics, see department of materia medica and therapeutics.

DENTAL ANATOMY AND OPERATIVE TECHNIC

LABORATORY TECHNIC—In the laboratory work each student is required to carve from blocks of bone teeth of each class: i. e., incisors, cuspids, bicuspid and molars, and to mount them in models on an articulator; and to make free hand drawings of the individual teeth; to make various dissections of the natural teeth for the study of the pulp chambers and root canals. Dr. VOLLAND.

Freshman year, first semester. Four laboratory periods each week.

INSTRUMENTATION—Instrument nomenclature; instrument making; study of enamel cleavage and the cutting of tooth structure, using extracted teeth. Dr. VOLLAND.

Freshman year, second semester. Two laboratory periods each week.

CAVITY PREPARATION AND FILLING—Study of filling materials and appliances used in operative work. Preparation of cavities and insertion fillings. Study of pulp chambers and canals, and insertion of root-canal fillings. Dr. VOLLAND.

Junior year, first semester. Four laboratory periods each week.

DENTAL ANATOMY LECTURES

Throughout the year a course of lectures is given which is supplemented by the course in laboratory technic. A detailed study of the surfaces, markings, development, occlusion, pulp cavities, and abnormal formations of teeth constitute the course of lectures on the subject. The student's attention is especially directed toward an understanding and application of the practical principles of tooth form and occlusion. The student makes free hand drawings of teeth and pulp cavities as discussed. A large selection of specimens, charts, models, and the stereopticon are used to illustrate the lectures. Dr. VOLLAND.

Freshman year; one hour a week.

DEPARTMENT OF PROSTHETIC DENTISTRY

PROFESSOR HOSFORD; DR. MORROW, DR. SPENCE, DR. VOS

The work of this department is given as a graded course extending through the freshman, junior and senior years and will be divided into technical, didactic and clinical courses.

1. **FRESHMAN PROSTHETIC DENTISTRY.**—A didactic and laboratory course including the principles and methods of taking impressions, pouring models. The making of dies and counter dies. The making of different styles of dentures on bases of vulcanite, aluminum and goldine. Vulcanizing, repairing and finishing of cases made. Laboratory work nine hours each week. Dr. MORROW.

First semester.

a. A didactic and laboratory course including all the practical steps in the making of a full upper and lower denture; the practical study of articulation, occlusion, and the selection and arrangement of the teeth.

b. **CROWN WORK.**—Preparation of the roots of extracted teeth for bands, fitting bands, carving cusps in plaster and other materials; making dies, swaging cusps, soldering and the finishing of crowns. This course will include the different methods of making shell and porcelain crowns.

Laboratory work nine hours a week; one lecture a week.
Dr. MORROW.

Second semester.

2. JUNIOR PROSTHETIC DENTISTRY—A didactic and laboratory course embracing the principles and their applications in the making of various kinds of crowns and bridges on models secured from practical cases. A laboratory course in the making of porcelain crowns including the manipulation of porcelain, use of the electric and gasoline furnaces, and the baking of different porcelains.

Laboratory periods twelve hours a week; one lecture a week. Dr. MORROW, Dr. VOSS.

First semester.

2. a. The work of the second semester consists of actual clinical experience applying the principles and methods taught in the didactic and laboratory work of the first and second years. This practical course is broadened by the lecture course on the clinical work of the students. Infirmary twenty-seven hours each week; one lecture a week. Professor HOSFORD, Dr. SPENCE, Dr. VOS.

Second semester.

3. SENIOR PROSTHETIC DENTISTRY—A didactic, recitation, and clinical course for senior students from September to June. Each student is required to perform a certain amount of prosthetic work in the infirmary to prove his or her efficiency in this subject. The large clinical attendance furnishes every facility to the student to meet every requirement.

Two lectures and one recitation each week, for thirty-six weeks.

INFIRMARY HOURS, twenty-seven each week. Professor HOSFORD, Dr. SPENCE.

DEPARTMENT OF ORAL PATHOLOGY, ORAL SURGERY, AND HYGIENE

PROFESSOR BROWN

ORAL SURGERY

Operative, therapeutic and mechanical treatment of diseases and deformities of the mouth, face and jaws will be

considered with careful distinction between those affections best suited for reference to dentists, medical practitioners and general or oral surgeons.

The divisions and special features of the courses of study in this department are as follows:

JUNIOR STUDENTS

1. **GENERAL CONSIDERATIONS**—Health, disease, pulse, respiration, conditions favorable and unfavorable to operation, shock, asepsis, preparation of patient for operation, care of hands, instruments, dressings, etc.

2. **WOUNDS**—Varieties and treatment, bandages, dressings, processes of tissue repair. Hemorrhage, different forms and methods of checking.

3. **LIGATURES AND SUTURES**—Various materials used, methods of preparation and application.

4. **SURGICAL ASPECT** of inflammation, suppuration, abscess, ulcer, necrosis, caries, gangrene.

5. **ASEPTIC FEVER**, septic fever, septicemia, pyemia. Pernicious anemia, leucothemia, digestive and nutritive disturbances.

6. **ERYSIPELAS**, tetanus.

7. **DISEASES OF THE MUCOUS MEMBRANE**. Stomatitis, leucoplakia, gangrene oris, specific disease, mucous cysts, etc.

SENIOR STUDENTS

1. **REVIEW OF SUBJECTS** treated in the junior year.

2. **STUDY OF DIFFERENTIAL DIAGNOSIS** through which the true etiologic factors of many more or less obscure pathologic conditions may often be determined, and quite frequently found to have their origin from oral disturbances not difficult to relieve, and thus by comparatively simple measures, make it possible to give almost incalculable benefit to patients.

3. **AFFECTIONS OF THE MAXILLAE**—Periostitis, necrosis, tuberculosis, syphilis, fractures, dislocation, ankylosis. Diseases of the maxillary sinus.

4. **DISEASES OF THE SALIVARY GLANDS**—Parotitis, ptyalism, inflammatory conditions due to calculi, fistulae, ranula.

5. NEURALGIA, epilepsy, muscular spasm, paralysis, neurasthenia and other neurosis, related to tri-facial irritation.

6. HARE LIP, cleft palate and speech defects.

7. TUMORS—Practical study of those malignant and non-malignant growths which most frequently affect the jaws and mouth.

All of the foregoing pathologic conditions are comprehended within the special field to which the practice of the instructor is limited. Experience in hospitals having given a somewhat extensive opportunity for observation, it is possible to deal with each division from the standpoint of actual practice. Blood counts, microscopic sections of tissue, tumors, etc., and other data necessary for illustration and reference have been preserved from patients treated. Thus it is believed more benefit will accrue to the student than is usually possible where books alone must be depended upon for guidance.

Large numbers of casts of mouths of patients, from the newly born to adult and middle life, having congenital or acquired clefts of both hard and soft palates, hare lip deformities, double and single in almost every degree, as well as photographs and phonographic speech records before and after operative treatment will be used to convey correct ideas of the possibilities and limitations in this direction.

ORAL PATHOLOGY

The importance of this study will be brought directly to the members of the class through illustration with photomicrographs prepared for use in the stereopticon, and microscopic sections showing a very considerable number of pathologic changes in the histologic structure of the organs and tissues within or intimately associated with the special operative field of dental, and oral surgery. Many of these have been taken from cases of known history, and are therefore best calculated to impress the essentially practical features of the subject. Skiagraphs, charts and drawings will also be used to supplement didactic lectures and clinical study of patients.

DISEASES OF THE DENTAL ORGANS

TEETH—Perversions of eruptive developmental processes. Dental caries, erosions and abrasion, discoloration.

DENTAL PULP-HYPEREMIA, pulpitis, devitalization, gangrene, secondary dentine, pulp modules, calcareous degeneration, polypi.

PERICEMENTUM—Gingival and calcic inflammations, pericementitis, dento-alveolar abscess, pyorrhea alveolaris, hypercementosis, absorption of roots of permanent teeth. Pathological conditions of other organs and tissues of the mouth and jaws will be treated in the order outlined in the oral surgery course.

ORAL HYGIENE

Prophylaxis in relation to healthful preservation of the dental organs and tissues of the mouth, antiseptic mouth washes, tooth powders, resistance of oral secretions to germicidal agents and subsequent difficulty in overcoming mouth bacteria, brushes, etc., will be given full consideration as well as ample illustration.

The purport of further clinical and didactic study will be to establish as the basal principle of this course, the fact that care of the buccal cavity is properly an essential part of all sanitation. The frequent intimate relation between pathologic affections of the eye, ear, nose, throat, and the stomach with diseases of the mouth, as well as disorders of the nervous and circulatory systems having similar association, must in the light of recent advances in this direction be fully studied with a view to effective prevention of disease, whether local or general in its manifestation.

DEPARTMENT OF ORTHODONTIA

PROFESSOR BRADY

The course in this branch begins in the middle of the junior year, and continues through the entire senior year, the work being strictly graded and the course progressive throughout. The work of the junior year consists mainly

of a preliminary technic course with lectures on the foundation topics of normal occlusion and classification of malocclusion for diagnosis.

The work of the senior year consists of practical work in the infirmary, with lectures on the causes and treatment of malocclusion and the conduct of orthodontia practice both as a specialty and in connection with general practice. All practical work is under the direct supervision of the professor in charge. The supply of clinical material is always more than can be cared for, allowing selection of suitable cases. Each senior student must treat at least one practical case.

1. **ORTHODONTIA TECHNIC**—A combined laboratory and lecture course upon normal occlusion and the diagnosis of malocclusion, with the technique of models and appliances, including retaining appliances. This number occupies the entire second semester of the junior year. Instruction is given through one lecture and two laboratory periods a week.

2. **PRACTICAL ORTHODONTIA**—A combined lecture and clinical course in the physiology of orthodontia, the causes and treatment of malocclusion, the relation of orthodontia to rhinology and oral surgery. One lecture a week with practical instruction in the infirmary from 3 to 5 daily throughout the senior year.

DEPARTMENT OF CLINICAL DENTISTRY AND REGIONAL ANATOMY

PROFESSOR ROGERS

The instruction in this department is given by means of lectures and special clinics.

1. These lectures treat of the professional relation which should exist between the practitioner and his patients and all matters which tend toward truest success in the dental profession. Among the subjects discussed are the following: location, equipment of an office, securing of patronage, ethics, management of patients, personal habits, business methods, fees, credit, collections, citizenship, etc.

2. The special clinics which are given from time to time afford the students opportunity for seeing and diagnosing the more difficult cases for treatment from a clinical view point. The large number of cases which may be selected from the infirmary give excellent advantages along this line. Seniors, one hour a week first and second semesters.

3. REGIONAL ANATOMY—Lectures and recitations. The instruction in regional anatomy is supplementary to the instruction in general anatomy. It includes a thorough study of the bones, muscles, bloodvessels, and nerves of the head and face, especially those intimately associated with the physiology and pathology of the dental organs. Lectures on blood and nerve supply to the teeth are illustrated by the stereopticon. Other lectures are illustrated by maps, charts and models, and by well prepared specimens of the head, jaws, teeth and nerves *in situ*.

Senior year, first semester and first quarter of second semester, one hour each week.

DEPARTMENT OF ANATOMY

PROFESSOR PRENTISS; DR. LORD, DR. FOX, MR. WOODS, MR. CADWALLADER, MR. SMITH, MR. WOODWORTH

The freshman class on entrance is divided into three sections to accommodate itself to the three natural divisions of the body; viz., head and neck; upper extremity and thorax; and lower extremity and abdomen. The object of this division is to break the class up into small sections, that each student may receive individual instruction.

Each third of the class is assigned to one of the parts of the body, receiving the bones of that part. For one-sixth of the year it receives demonstrations on the osteology and arthrology of that part; the following sixth of the year being devoted to the study of the soft parts including the muscles, nerves and arteries.

The sections then take up respectively the next third of the body until at the end of the year the entire body has been considered by each student. Lectures and quizzes enlarge upon the course.

The junior class covers the viscera of the body including the brain, thoracic viscera and abdominal viscera by means of lectures and quizzes. Special lectures and demonstrations are given by the professor of anatomy to the junior class upon the bones of the head, accessory sinuses, cranial nerves, blood supply of the head, etc., etc.

During the course in anatomy the students are required to make a dissection of the head and neck and extremity.

At the end of each year a practical and theoretical examination for advanced standing is held upon the work covered.

DEPARTMENT OF PHYSIOLOGY

PROFESSOR MCCLINTOCK; MR. KLEINSORGE, MR. RINGEN, MR. PADGHAM

The work in physiology is given during the first two years of the dental course and consists of a graded course of lectures which are profusely illustrated by use of projection apparatus and by numerous demonstrations and practical experiments. Recitations are held each week covering the lecture work, the class being divided into small sections so as to insure individual work.

For a description of the work offered in Physiology see courses 1, 2, 3, 4, 5, 6, 7, and 12 on pages 360-362.

DEPARTMENT OF CHEMISTRY AND METALLURGY

PROFESSOR ROCKWOOD; MR. BRYDEN, MR. REMINGTON, MR. POORE

8. GENERAL CHEMISTRY—This is taught by lectures and recitations, in which the principles of the sciences are considered as well as its technical applications. The chemistry of both non-metals and metals is included. Freshman year, second semester, three hours each week. Mr. REMINGTON.

30. ANALYTICAL CHEMISTRY—A laboratory course, the object of which is to familiarize the student with chemical

manipulations, also the properties of the most important metallic compounds. Freshman year, second semester, five hours a week. Mr. POORE, Mr. REMINGTON.

15b. DENTAL METALLURGY—The lectures treat of the separation of the metals from their ores, their refining, and the properties of those most used in dentistry, also the preparation, properties and methods of working dental alloys, including the nature, manufacture and testing of amalgams. Junior year, second quarter, three lectures each week. Mr. BRYDEN.

17b. PRACTICAL DENTAL METALLURGY—This consists of the laboratory study of the metals most commonly used in dentistry, their physical properties and chemical changes, particularly those produced by the action of heat. Opportunity is afforded for making and testing amalgam alloys and for learning the methods of refining gold, silver and platinum. Junior year, second quarter, five hours each week. Mr. BRYDEN, Mr. POORE, Mr. REMINGTON.

DEPARTMENT OF DENTAL MATERIA MEDICA AND THERAPEUTICS

PROFESSOR CHASE; PROFESSOR BREENE, MR. _____

1. ORGANIC DENTAL MATERIA MEDICA—The course is introduced by definitions, and a discussion of routes and modes of administering drugs, dosage, classification of official preparations, and prescription-writing, including the subject of incompatibilities. Following such general topics, organic drugs are taken up in a natural order of grouping. Freshman year, second semester. Two lectures and one recitation each week. Professor CHASE.

2. ORGANIC AND INORGANIC DENTAL MATERIA MEDICA—The preceding course is completed, followed by the consideration of drugs of inorganic origin. As in course 1 the drugs will be grouped with reference to some dominant or characteristic action. Thus are grouped drugs affecting the nervous system, the heart and circulatory system, the respiration, etc. The prescription work of the preceding course is carried forward and perfected by means of exercises and drill in writing same. Toward the close of the

semester a general review is given. Junior year, first semester. Two lectures and one recitation a week. Professor CHASE.

3. PHARMACOLOGY—In order to familiarize the student with the action of the more important drugs used in his profession a demonstration course in pharmacology will be given during the junior year. Mr. ———.

4. DENTAL THERAPEUTICS—In addition to the foregoing the members of the junior class will be required to attend a special course in dental therapeutics wherein will be presented those drugs which are of special use to the practicing dentist. Junior year, second semester. One lecture each week. Professor BREENE.

5. DENTAL THERAPEUTICS—This course is a review of the work given in the junior year, with additional instruction in clinical therapeutics. This gives the student a thorough understanding of practical methods of treatment.

The application and prescribing of remedies for the prevention as well as the cure of diseased conditions is demonstrated by the instructors in charge of the infirmary.

Senior year, first and second semesters. One lecture each week with recitations. Professor BREENE.

6. MEDICAL LATIN—Those who have had but little opportunity to study Latin previous to entering upon their dental education will be afforded an opportunity in this course for special drill, with the view to acquiring such a knowledge as must be in the possession of the accurate prescription-writer. It includes the work outlined in any elementary treatise of Latin, and, in connection with same, work in prescription-writing. In the first semester the grammar is specially studied. Therein are found those principles of Latin etymology and construction which are essential to an intelligent understanding of the terminology of pharmacy and dentistry. In the second semester the study of the grammar is continued, special attention being given to the pharmacopœial nouns and anatomical terms. The prescription is taken up, its definition, synthesis, formulæ, form, grammatical construction, language, and analysis being studied. A review of the entire work completes the course. First semester, freshman year. Two hours each week.

7. **HYGIENE**—A course of lectures upon this subject will be delivered during the junior year, in which will be discussed all matters pertaining to both public and private hygiene. The subject will be illustrated by means of maps and models showing different styles of machinery for filtration of potable waters—discussing also questions pertaining to their source, etc.—Also the results of analyses of potable waters from private wells will be presented with their conclusions, etc. The results of analyses of food-stuffs will be given and all other matters affecting the public health. Professor CHASE.

DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY

PROFESSOR PRENTISS; DR. HOOVER, MR. LAMBERT, DR. FOX,
MR. CROW, MR. MICHELL, MR. WARD

The department of histology and embryology occupies the entire second floor of the newly completed medical laboratory building. This building has been designed with special reference to the requirements of microscopical work. North and east exposures, ample room, and unobstructed light give ideal conditions for this line of work. The laboratories of this department consist of two large rooms for general class work, a special laboratory equipped for advanced research work, preparation room containing a complete stock of reagents, human tissues and those of lower animals, appliances such as microtomes for brain sections, paraffin and celloidin work, paraffin bath, electric motors with apparatus for preparing sections of teeth, bone, etc.

In connection with the laboratories are rooms devoted to a library, containing the latest books and journals pertaining to histology and embryology, a museum containing alcoholic specimens, and several thousand microscopic slides of stained and injected adult and embryonic tissues.

Classes are divided into small sections and a sufficient number of demonstrators are employed so that each student may have individual attention.

The illustrative material consists of charts, diagrams, models and black-board drawing. Each student prepares for himself a complete series of 150 permanent specimens, illustrating the microscopic anatomy of the human body.

Each student is provided with a compound microscope and individual locker.

The lecture room is directly off the laboratories. It has seating capacity of 250 and is provided with the modern type of stereopticon, charts, and other appliances necessary to illustrated lectures.

The study of histology is considered in connection with the subject of gross anatomy. As the macroscopic structures are treated upon, the microscopic considerations are immediately taken up. With the beginning of the college year, the consideration of epithelial cells, connective tissues, muscle cells and nerve cells are studied preliminary to their recognition in the general tissues. At the termination of this period the microscopy of the digestive tract is begun. Beginning with the alimentary canal, its diverticula naturally follow, i. e., liver, pancreas, salivary gland, ductless glands originating in the alimentary canal and the respiratory tract. The buccal cavity and pharynx are especially considered. The adult and developing teeth are studied in detail including the enamel organ. Next are considered the ductless glands other than those developing from the alimentary canal, and then the genito-urinary system, and finally the integumentary structures.

Two lectures and one quiz a week for each student. Professor PRENTISS and Dr. HOOVER.

Laboratory work four hours a week. Professor PRENTISS, Dr. HOOVER, Mr. LAMBERT, Dr. FOX.

The course is concluded with a slide examination on the tissues studied.

DEPARTMENT OF PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL, MR. BYRNES, MR. MEENTS,
MR. HARKEN, MR. ROYAL, MR. COOK, MR. STEUCK
MR. VALKENAAR

26. BACTERIOLOGY—A didactic recitation, demonstration and laboratory course, which includes the preparation of artificial culture media, the cultivation of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different patho-

genic micro-organisms as they are related to the various infectious processes. Special attention is given to the micro-organisms of the buccal cavity and their relation to the various infectious processes of adjacent tissue.

Junior year, three hours each week during the first semester. Professor ALBERT, Dr. EGDAHL, Mr. BYRNES.

27. GENERAL PATHOLOGY—A didactic, recitation and demonstration course including the etiological factors in disease processes, the disturbances of circulation and nutrition, inflammation, atrophy, degeneration, infiltration, necrosis, hypertrophy, and allied subjects.

Junior year; one hour a week during the first quarter of the second semester. Professor ALBERT.

28. TUMORS AND SPECIAL PATHOLOGY—A didactic, recitation and demonstration course, including all forms of tumor formations, and the various disease conditions which occur within or about the oral cavity, as well as pathological conditions in other parts of the body, such as the gastrointestinal tract, the urinary tract, etc., which by the disturbances of metabolism which they produce, effect a change in the oral tissues.

Junior year; one hour each week during the second quarter of the second semester. Professor ALBERT.

29. PATHOLOGICAL HISTOLOGY—A laboratory course in general pathology, tumors, and special pathology, which is illustrative of the didactic lectures, comprising the preparation and study of slides, showing the general pathological changes that occur in human tissue, a complete collection of tumors, and special diseased conditions of the oral cavity and adjacent structures.

Special attention is given to the drawing of the microscopic specimens. To test the knowledge of the student, reviews of unknown specimens are given at different times during the course.

Junior year, two hours each week, during the first semester. Professor ALBERT, Dr. EGDAHL, Mr. HARKEN.

COMPARATIVE ODONTOGRAPHY

PROFESSOR NUTTING

A general view of the dental organs of animals affords

many points of practical interest to the dental student, and throws light on some perplexing questions that arise in connection with peculiarities of the human teeth. Such a view is afforded by this course of lectures. Particular attention is paid to the various mechanical contrivances by which Nature has met special dental problems. In addition to this general discussion of the teeth of animals, some attention is paid to the embryology and histology of these organs. A special feature of the course is a demonstration, by means of projection of the actual slides, of some obscure points regarding the vascular supply of the teeth and peridental membrane. This is made possible by means of a series of preparations by which sections of teeth, including the pulp and other soft structures, are made without decalcification.

The course is amply illustrated by specimens from the natural history museum, charts, and lantern slides.

Second semester, senior year.

DENTAL JURISPRUDENCE

PROFESSOR GREGORY

The state law regulating the practice of dentistry is fully discussed. The general principles of legal liability will be explained and suggestions are made as to the legal rights of the practitioner with reference to his compensation.

PRACTITIONERS' COURSE

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue and what methods in practical work they may take up. The curriculum will be arranged more especially to give a thorough course in pulp and abscess treatment and other pathological conditions of the oral cavity. In addition to this, detailed instruction will be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

REQUIREMENTS FOR ADMISSION TO PRACTITIONERS' COURSE

Anyone in reputable practice may enter this course. Graduates of this college will be admitted on the payment of the matriculation fee only. Graduates of other reputable dental schools will be admitted on the payment of the matriculation fee and \$10.

A full corps of demonstrators in all subjects has been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each a specialist.

FEES FOR PRACTITIONERS' COURSE

Matriculation fee	\$10.00
Tickets, including certificates	25.00
Laboratory fee	6.00
	<hr/>
	\$41.00

Other post-graduate work, such as porcelain, orthodontia, etc., may be arranged for upon application to the faculty.

DENTAL ASSISTANT'S COURSE

A training school for dental assistants has been authorized by the board of regents. The course will extend through one year of nine months, beginning and ending with the regular dental year. The fee for tuition is \$15 for the course, of which \$7.50 is payable on the date of registration, and the balance at the opening of the second semester. Students who have not previously matriculated will pay the regular matriculation fee of \$10. Candidates for admission to this course must possess a common school education, and must present two letters of recommendation as to their capabilities, qualifications and moral character. No other examination for admission will be required. This course will be both didactic and practical, thorough instruction being given in operative and prosthetic technic, therapeutics, pathology, and dental anatomy; there are also special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory.

An important additional feature of this course will be the special training of young women with a view to fitting them to perform the duties of dental assistant nurses.

In this new and promising field there is at present a demand for persons whose capabilities and training fit them for the work. The remuneration is good and the employment of a much less arduous character than that required of a medical nurse. The hours are short and regular, while surroundings are usually such as appeal to persons of culture.

Credits obtained in this course will be allowed to those desiring to attend and complete the regular dental course, providing the requirements are fulfilled as provided for the regular dental course.

DENTAL MUSEUM AND LIBRARY

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of malformation, normal or diseased conditions as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labelled with the donor's name and carefully preserved.

TUITION

Every student, before entering any department of the university is required to pay a matriculation fee of ten dollars. This fee is required the first year only.

The tuition charges in the College of Dentistry are twenty-five dollars a semester, and are due at the opening of each semester. A student registered in more than one college of the University is required to pay the tuition of the college having the higher or highest rate of tuition of the colleges in which he is registered, and is then granted free tuition in any other college of the University.

Tuition fees are in no case remitted.

Every student, before graduating or receiving any

degree in any college of the University, is required to pay a diploma fee of ten dollars for each degree he receives.

There are no extra fees whatever, but a deposit of \$3.00 must be made to cover breakage and loss before beginning work in the chemical laboratory. All material used in the laboratory and operative technic work, except gold, is furnished by the college.

The above statement of the fee is now in effect, and will be understood to apply to all students in the college, entirely irrespective of the date of registration.

TEXT-BOOKS AND BOOKS OF REFERENCE

These can be obtained at the book stores in Iowa City. Dealers give a discount of from ten to twenty per cent. The following are recommended by the faculty:

Operative Dentistry: American Text-book of Operative Dentistry, Ottolengui, Flagg's Plastics, Johnson's Principles and Practice of Filling Teeth.

Prosthetic Dentistry: Essig's Prosthetic Dentistry, Richardson's Mechanical Dentistry, Evan's Artificial Crown and Bridge Work.

General Pathology: Green, Stengel, Zeigler, Delafield, Pruden.

Bacteriology: Abbott, Crookshank, McFarland.

Histology: Piersol, Schaefer, Stirling, Klein.

Oral Pathology and Hygiene: Green, Garretson's Oral Surgery, Wilson on Hygiene, Marshall's Diseases of Face, Mouth, Jaws, Barrett's Oral Surgery, Burchard's Dental Pathology.

Chemistry: General Chemistry, Bloxam, Remsen; Qualitative Analysis, Rockwood.

Metallurgy: Essig, Hodgen.

Materia Medica: White and Wilcox, Potter.

Therapeutics: Gorgas, Hare, Long.

Dental Therapeutics: Gorgas, Eli Long, Borland.

Anatomy: Cunningham, Gray (13th edition), Holden's Landmarks, Quain (10th edition), Holden's Osteology, McClellan's Regional Anatomy, Treve's Applied Anatomy.

Physiology: Landois and Sterling, Kirk, Stewart.

Orthodontia: Angle, Gullford.

Dental Anatomy: Black, Broowell.

Dictionaries: Dorland, Harris, Dunglison, Thomas, Gould.

GENERAL INFORMATION

Seats will be assigned to classes in the order of registration at the University.

Operating chairs will be assigned to the senior class in the order of registration at the University, but this privilege will be forfeited unless the student is in attendance at the opening of the session.

Students should make arrangements to be in attendance on the first day of the session, as the faculty cannot adjust their plans to the tardy arrival of students by wasting time on unimportant lectures at the beginning. Promptness at the beginning of the term is very essential.

DENTAL CLINICS

STATISTICS—FOR THE YEAR 1905-1906

No. of patients treated in all departments..... 9140

OPERATIVE DEPARTMENT

No. of fillings—gold	1145
No. of gold inlays	51
No. of porcelain inlays	117
No. of fillings—amalgam	1955
No. of fillings—cement	790
No. of pulp cases	1010
No. of root fillings	925
No. of cleaning cases	604
No. of pyorrhœa cases	95
No. of extraction cases	293
No. of abscess cases	164

PROSTHETIC DEPARTMENT

No. of full dentures	97
No. of full dentures—metal	47
No. of partial dentures	82
No. of partial dentures—metal	47
No. of crowns	545
No. of porcelain crowns, including baked.....	186
No. of pieces of bridge work	289
No. of artificial velums	2

ORTHODONTIA DEPARTMENT

No. of sets of teeth regulated..... 31

ORAL SURGERY DEPARTMENT

No. of cases necrosis	10
No. of cases maxillary sinus	8
No. of cases hare lip.....	5
No. of cases cleft palate	6

Specimen Programme of the College of Dentistry:**FRESHMAN YEAR**

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9		Prosthetic Dentistry	Dental Anatomy	8 to 10 Histology Laboratory		8 to 10 Chemical Laboratory
9 to 10	Physiology	Physiology	Histology		Histology Recitation	
10 to 11	Chemistry	Anatomy		Chemistry	10 to 12 Chemical Laboratory	
11 to 12	Physiology Recitation 107 Med Hall			Anatomy Recitation 1st Semester	Anatomy 1st Semester	
1 to 2	1 to 4 Sect. I Prosthetic Technic	1 to 4 Sect. II Prosthetic Technic	1 to 4 Sect. I Prosthetic Dentistry	1 to 4 Sect. II Prosthetic Technic	1 to 4 Prosthetic Technic	
2 to 3	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	
3 to 4	Dental Anat. Technic	Dental Anat. Technic	Dental Anat. Technic	Dental Anat. Technic	Dental Anat. Technic	
4 to 5						

Chemistry 2nd Semester, Chemical Laboratory, 6 hours per week.
 Materia Medica 2nd Semester, 11-12 Wednesday and Thursday.
 Anatomical Laboratory 3 to 5 each day as per section announced.

JUNIOR YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Bacteriol'gy		Bacteriological Laboratory	Orthodontia	Special Pathology	Oral Surgery
9 to 10	Anatomy Recitation	Operative Dentistry	8 to 9:45	Prosthetic Dentistry	Physiology	Metall'gy
10 to 11	Physiology Recitation	10 to 12 Metallurgical Laboratory	Metall'gy	Anatomy	Metallurgical Laboratory	
11 to 12	General Pathology		Materia Medica	Materia Medica Room 107 Med. Hall	10 to 12	
1 to 2	1 to 5 To Nov. 5 Operative Technic	1 to 5 To Nov. 5 Operative Technic	1 to 5 To Nov. 5 Operative Technic	1 to 5 To Nov. 5 Operative Technic	1 to 5 To Nov. 5 Operative Technic	
2 to 3	1 to 5 Prosthetic Technic	1 to 5 Prosthetic Technic	1 to 5 Prosthetic Technic	1 to 5 Prosthetic Technic	1 to 5 Prosthetic Technic	
3 to 4	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	Nov. 5 to Dec. 21	
4 to 5						

Chemistry 2nd Quarter.
 Materia Medica Second Semester.
 Anatomical Laboratory, 3 to 5 as per section to be announced.
 Special Therapeutics 2nd Semester.
 Special Histology Second Semester.

SPECIMEN PROGRAMME

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SENIOR YEAR

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Operative Dentistry	<i>Special Therapeutics</i>		Prosthetic Dentistry	Prosthetic Dentistry	9 to 12 <i>Infirmary</i>
9 to 10	<div>Assembly 9-45 10, 15 Wed. day</div>	Operative Dentistry	Regional Anatomy	Orthodontia	Clinical Dentistry	<i>Special Pathology</i>
10 to 11					<i>Special Pathology</i>	
11 to 12		<i>General Pathology</i>	<i>Special Lectures</i>	<i>Orthodontia Technic</i> 10-12	<i>Special Histology</i> 2d. Sem. 10-12	<i>Special Pathology</i>
1 to 2					<i>Special Lectures</i>	Surgical Clinic 11 a. m.
2 to 3	1 to 5	1 to 5	1 to 5	1 to 5	1 to 5	1 to 5
3 to 4	<i>Infirmary</i>	<i>Infirmary</i>	<i>Infirmary</i>	<i>Infirmary</i>	<i>Infirmary</i>	<i>Infirmary</i>
4 to 5						

Special lectures on Dental Jurisprudence, Comparative Odontology will be announced.

Oral Surgical Clinic 9 A. M., Saturday.

INSTRUMENTS AND MATERIAL REQUIRED BY FRESHMAN STUDENTS

The full list is absolutely required of every student. Instrument numbers according to S. S. White catalogue.

- 1 pair each C. and B. shears, curved and straight, No. 6.
- 1 pair curved crown shears, No. 11.
- 1 each ivory chisels, right and left.
- 1 pair collar pliers, No. 118.
- 1 pair contouring pliers, No. 115.
- 1 horn mallet, straight.
- 1 riveting hammer, B.
- 1 mouth blow-pipe, 12-inch, nickel plated.
- 3 pairs solder tweezers, B, C and E.
- 1 4-inch half round plate file, cut No. 2.
- 1 4-inch half round plate file, cut No. 4.
- 1 4-inch round plate file, cut No. 2.
- 1 6-inch flat plate file, cut No. 2.
- 1 each 6 and 10-inch mill cut files.
- 1 double end half round vulcanite file, 8-inch.
- 1 round vulcanite file, 4-inch.
- 1 mechanical saw frame.
- 1 dozen assorted saws.
- 1 wax spatula No. 2.
- 1 plaster spatula No. 17.
- 1 each Kingsley finishers, Nos. 1 and 2.
- 1 enamel chisel No. 4.
- 1 each ivory chisels, right and left.
- 1 articulator, Bonwill or Gritman.
- 1 plaster bowl, B.
- 1 each upper impression trays, Nos. 21, 22, 23, Angle's pattern, and Nos. 2, 3, 12, regular patterns.
- 1 each lower impression trays Nos. 24, 25, 26, Angle's pattern, and Nos. 3, 11, 15, regular patterns.
- $\frac{1}{2}$ pound yellow wax, for base plates.
- $\frac{1}{2}$ pound modeling composition, No. 2.
- Whitney flask, iron.
- 1 flask wrench.
- 4 pounds babbitt metal, Haskell's formula.
- 4 pounds counter-die metal.
- 1 Bailey moulding flask, large.
- 1 spool binding wire, small.
- 1 pin punch, nickel plated.
- 1 crown anvil.
- 1 small bench vise, detachable.
- 1 pound box powdered pumice stone.
- 1 pound box prepared chalk.
- 3 sheets sandpaper, Nos. 00, $\frac{1}{2}$, 1.
- 1 felt wheel, No. 2, round edge.
- 1 felt wheel No. 2, knife edge.

INSTRUMENTS REQUIRED

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- 1 felt wheel, No. 0.
- 1 felt cone, small, pointed, $\frac{3}{4}$ -inch diameter.
- 1 felt cone, pointed, 1-inch diameter.
- 1 each brush wheels, Nos. 23, 77, 80.
- 1 carborundum wheel, square edge stump, medium grit, $\frac{5}{8}$ -inch diameter, $\frac{1}{8}$ -inch thick, mounted on mandrel, No. 303.
- 1 Bunsen burner, Franklin Educational Co.'s No. 291.
- 10 inches $\frac{1}{4}$ -inch rubber tubing.
- 1 borax slate.
- 1 common whetstone.
- 1 box Sam's soldering flux.
- 1 asbestos soldering block, with handle.
- 1 Melott's moldine outfit.
- 1 stick rouge.
- 2 ounces shellac varnish, with brush.
- 2 ounces collodion, with brush.
- 2 ounces Elliott's parting fluid, with brush.
- 1 Colton file cleaner.
- 1 Boley millimeter guage.
- 1 Reeses' crown soldering tweezers.
- 1 copper ladle, 3-inch.

(Probable cost, about \$33.00).

OPERATIVE INSTRUMENTS AND MATERIALS REQUIRED BY JUNIOR AND SENIOR STUDENTS

- 1 each S. U. I. amalgam instruments, Nos. 2, 3, 4.
- 1 each Arrington amalgam instruments, Nos. 8, 9.
- 1 set each Blacks excavators and chisels, Nos. 2, 4, 5, 11, 14, 20, 22, 23, 26, 27, 33, 40, 44, 46, 51, 52, 53, 54, 63, 64, 65, 66, 73, 74, 79, 80, 82, 83, 84, 85, 86, 87, 88, 89, 93.
- 1 broach holder.
- $\frac{1}{2}$ dozen Young brooches, extra fine.
- $\frac{1}{2}$ dozen Young Aseptic brooches, assorted.
- $\frac{1}{2}$ dozen Donaldson's pulp canal cleaners No. 4.
- $\frac{1}{2}$ dozen Kerr's universal broaches, assorted.
- 1 flexible spring canal plugger, No. 3.
- 1 explorer, No. 3.
- 1 each scaler, Nos. 1, 3, 62.
- 1 each Allport's pyorrhea instruments, Nos. 4, 6, 7, 14, 15.
- 1 each burnisher, Nos. 2, 33.
- 1 each plug trimmer, Nos. 31, 32.
- 1 box strips, assorted.
- 1 disk tray (1400).
- 1 box extra fine cuttle-fish disks.
- 1 dental engine.
- $\frac{1}{2}$ gross cavity burs, assorted.
- 1 right angle.
- 2 dozen right angle burs, assorted.
- 1 Herbert's rotary burnisher, No. 2.
- 1 each plug finishing burr, Nos. 200, 224, 242.
- 1 each engine drills, Nos. 102, 169.

- 3 mandrels, No. 303.
- 1 each gem points, mounted, Nos. 12, 9, 6.
- 1 corundum cavity point, mounted No. 2.
- ½ dozen carborundum wheels, assorted.
- 1 each soft rubber cups, Nos. 1, 2, 3.
- 1 box leather polishing wheels.
- 1 cement spatula, No. 22.
- 1 glass mixing tablet, No. 2.
- 3 spools floss silk, waxed.
- 1 hot air syringe with reinforced point, No. 16.
- 1 mouth mirror, No. 6, (magnifying).
- 1 all metal, self-filling water syringe.
- 1 college pliers, No. 11.
- 1 foil carrier (Perry), No. 12.
- 1 alcohol lamp, Nos. 1 or 2.
- 1 annealing tray for gold.
- 1 ounce absorbent cotton.
- 1 ounce spunk.
- 1 box 6-inch cotton rolls, assorted.
- ½ yard rubber dam.
- 1 Brewer universal rubber dam clamp forceps.
- 1 Ainsworth rubber dam punch.
- 1 rubber dam holder, novel No. 4.
- 1 rubber dam weight, No. 3.
- 1 each Ivory dam clamps, Nos. 1, 2, 5, 7, 10, 11.
- 1 Arkansas stone in box.
- 1 "Every Day" mortar and pestle.
- 1 box tooth polishing brushes, assorted.
- 1 wood plugging mallet, No. 1.
- 1 thin ribbon saw.
- 1 each Bennetts automatic plugger points, Nos. 1, 2, 3, 4, 5, 7, 8, 10.
- 1 S. S. White automatic plugger point, No. 111.
- 3 automatic handles.
- 1 pair Case enamel cleavers.
- 1 pair gold foil shears, No. 8.
- 1 pair scissors, 6-inch, No. 27.
- 1 gum lance, No. 1.
- 1 bundle orange wood.
- 1 dozen ½-ounce bottles (square).
- 3 office preparation bottles, No. 6.
- 1 box labels (medicine).
- 2 dozen large napkins.
- 1 dozen towels.
- 50 small doilies.
- 1 sheet thin matrix material.
- ½ dozen disks, Vulcarbo disk.
- 1 separator (optional).
- 1 automatic plugger (optional).

Probable cost of the above set of instruments, complete, including dental engine, \$100 to \$125.

ALUMNI ASSOCIATION

OF THE COLLEGE OF DENTISTRY

OFFICERS FOR 1906-7

PRESIDENT, A. W. Starbuck, D. D. S., Iowa City, Iowa.

VICE-PRESIDENT, F. B. James, D. D. S., Wilton, Iowa.

SECRETARY, W. J. Brady, D. D. S., Iowa City, Iowa.

TREASURER, C. M. Work, D. D. S., Ottumwa, Iowa.

EXECUTIVE { **R. S. BANDY, D. D. S., Tipton.**
COMMITTEE { **WM. S. HOSFORD, D. D. S., Iowa City.**
 { **K. M. FULLERTON, D. D. S., Cedar Falls, Iowa.**

The time of next meeting of the Alumni Clinic will be announced at a later date by the Executive Committee.

**THE COLLEGE OF
PHARMACY**

THE COLLEGE OF PHARMACY

FACULTY

GEORGE EDWIN MACLEAN, B. A., M. A., B. D., PH. D., LL. D.,
President of the University.

603 College St. (103 Old Capitol)

WILBER J. TEETERS, B. S., M. S. PH. C.,

Dean of the College, Professor of Pharmacy, Pharmacognosy
and Director of the Pharmaceutical Laboratory.

West Side. (804 Pharmacy Laboratory)

EMIL LOUIS BOERNER, PH. G., Phar. D.,

Emeritus Professor of Pharmacy. 325 N. Dubuque St.

ELBERT WILLIAM ROCKWOOD, B. S., M. D., PH. D.,

Professor of Chemistry and Toxicology, and Director of the
Chemical Laboratory.

1011 Woodlawn. (Chemical Laboratory)

CHARLES SUMNER CHASE, B. A. B. S., M. A., M. D.,

Professor of Materia Medica and Therapeutics.

BOHUMIL SHIMEK, C. H., M. S.,

Professor of Botany. 529 Brown St. (201 Science Hall)

THOMAS H. MACBRIDE, B. A., M. A., PH. D.,

Special Lecturer. 728 Washington St. (206 Science Hall)

LAWRENCE MARSHALL BYERS, B. A., M. A., LL. B.,

Lecturer on Pharmacy Jurisprudence.

CARL L. VON ENDE, B. S., M. S., PH. D.,

Assistant Professor in Chemistry.

715 Gilbert St. (Chemical Laboratory)

WILLIAM J. KARSLAKE, B. S., M. S., PH. D.,

Assistant Professor in Chemistry.

ZADA M. COOPER, PH. G.,

Instructor in Pharmacy.

124 Bloomington St. (804 Pharmacy Laboratory)

ADIN NOYES BROWN, PH. G.,

Assistant Instructor in Chemistry.

CHARLES DELOS POORE, Anal. Chem.,

Assistant Instructor in Chemistry.

ROE E. REMINGTON, B. A.,

Assistant Instructor in Chemistry.

NELSON DAVE WELLS, B. PH.,

Tutor in Medical and Pharmaceutical Latin.

JAMES CHARLES MCGREGOR,

Undergraduate Demonstrator in Pharmacology.

THE COLLEGE OF PHARMACY

The College of Pharmacy of the State University of Iowa was organized in 1885, and is an integral part of the University. This college offers a broad, thorough, practical course in the various subjects pertaining to pharmacy. The necessity for technical training in this subject is now recognized by all who are seeking to prepare themselves for the responsible positions of today, open only to the thoroughly trained, as prescriptionists, manufacturing pharmacists or industrial chemists. The services of skilled and thoroughly competent pharmacists are in demand. It is the aim of the college, as the state school, to cooperate with the pharmacists of the state in their efforts to maintain and elevate the standard of the profession. In planning the laboratory courses, the advantage to the student is kept constantly in mind.

The influence of carefully prepared laboratory courses cannot be overestimated, since, requiring patience, exactness and skill they cannot help but leave an impression upon the character of the student. It is the formative period and habits of systematic industry help to lay the foundation for success in life.

Personal interest and instruction has always been a feature of the college, and probably, in a large measure, is responsible for the success of its graduates. The students have all the privileges and share the spirit of a great educational institution.

BUILDING

This college is comfortably located in a three-story building erected at a cost of about fifty thousand dollars and furnishing about twenty-five thousand square feet of floor space, perhaps the largest accommodations in the way of room enjoyed by any college of pharmacy in this coun-

try. The equipment of this building is of the most modern type and is in keeping with the development of the science. Through liberal appropriations periodically made by the legislature and board of regents, this equipment is being constantly enlarged, and affords excellent facilities for instruction. The lecture rooms are provided with all desirable conveniences for class demonstration, and with tablet chairs. The laboratories are especially roomy, the chemical and pharmaceutical laboratories, each occupying a floor space of 54x140 feet, which is divided into a large general laboratory and smaller rooms for special research. A seven horse-power gas engine furnishes the power for the drug mill, dynamo, etc.

REQUIREMENTS FOR ADMISSION

Each applicant for admission must present to the faculty a satisfactory certificate of good moral character.

The following classes of applicants may be admitted to junior standing without examination:

1. Graduates or matriculates of reputable universities or colleges who present diplomas or certificates of honorable dismissal from such universities or colleges.

2. Graduates of state normal schools, of accredited high schools or academies, or of other secondary schools whose courses of study are approved by the University, who present diplomas or certificates showing such graduation.

3. Pupils who have only partially completed the course of study of a state normal school, accredited high school or academy, or other secondary school whose courses of study are approved by the University, upon presentation of certificates signed by the superintendent or the principal showing that they have completed the equivalent of at least *two years* of high school work, or *sixteen* (16) preparatory credits.* This certificate must be made on a blank form which may be obtained by addressing the president of the University, the dean of the College of Pharmacy, or the university examiner.

* A preparatory credit is defined as the equivalent of *one* high school study *five* days a week during a semester at least *eighteen* weeks in length, on the basis of *four* studies a day.

All other applicants may be admitted *only upon passing examinations* in the subjects named in the programmes of entrance examinations given below, or other subjects which are real equivalents.

Applicants presenting certificates from accredited schools for work not fully meeting the requirements for admission, will be examined in the subjects in which they are deficient.

Notice is given that the requirements for admission are to be extended in subsequent years.

It is urged that anyone expecting to enter the College of Pharmacy next September send all certificates of preparatory work to the university examiner *as early in the summer as possible, and certainly before September 1*. If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the dean for signature.

Admission to the senior class is gained by passing an examination in the branches of study taught during the junior year. Students presenting evidence of having passed the junior examination in another recognized college or school of pharmacy will be admitted without examination.

ENTRANCE EXAMINATIONS

Any person expecting to enter the College of Pharmacy in September, 1906, should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the president of the University, the dean of the College of Pharmacy, or the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present at *his first examination as indicated in the programmes given below*. He should present himself at once at the office of the university examiner who will give all necessary directions.

For *each separate* examination given at any other time than that announced in the following programmes, a fee of *one dollar* will be charged by the University. For a series of two examinations covering two or more subjects, a fee of *two dollars* will be charged.

PROGRAMMES OF ENTRANCE EXAMINATIONS 479

PROGRAMMES OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Monday, September 17 to Wednesday, September 19, 1906

Arithmetic,	1 credit,	Monday,	8:00 a. m.
English and			
Eng. grammar,	2 credits,	Monday,	11:00 a. m.
United States history,	1 credit,	Tuesday,	8:00 a. m.
Civil government,	1 credit,	Tuesday,	1:30 p. m.
Algebra through			
quadratics,	3 credits,	Tuesday,	10:00 a. m.
Physical geography,	1 credit,	Tuesday,	3:00 p. m.
Botany,	1 credit,	Wednesday,	3:00 p. m.
Physiology,	1 credit,	Wednesday,	4:00 p..m.

SECOND SEMESTER

Thursday, January 31 to Saturday, February 2, 1907.

The examinations will be held at the same hours as in the programme above, reading Friday and Saturday for Tuesday and Wednesday, respectively.

SCHEDULE OF STUDIES

JUNIOR YEAR

Theoretical pharmacy.
Practical pharmacy.
Chemistry—lectures and recitations.
Chemistry—qualitative analysis.
Pharmaceutical arithmetic (First semester).
Botany.
Pharmacy Latin.
Materia medica.
Pharmacognosy (Second semester.)

SENIOR YEAR

Theoretical pharmacy.
Practical pharmacy.
Chemistry—organic.
Chemistry—quantitative.
Materia medica.
Botany.
Pharmacognosy.
Toxicology.

THIRD YEAR WORK FOR THE DEGREE OF PHARMACEUTICAL CHEMIST

Practical pharmacy.
Pharmacognosy—laboratory.
Chemistry—election of chemical work under advise-
ment of professor in charge. Total number of hours re-
quired each semester, 14.

OUTLINE OF THE PLAN OF INSTRUCTION

The courses of instruction, as outlined in the following pages, embrace lectures, recitations and laboratory exercises. Attention is called to the fact that the most modern methods of instruction are followed and an unusually large amount of carefully systematized laboratory instruction is given under the direct supervision of the professor in charge. The student in this way not only has an opportunity to apply theory but becomes proficient in manipulative skill, which is indispensable to the pharmacist. The laboratory method of instruction also has the advantage of impressing upon the mind scientific truths that would be soon forgotten if received merely as stated facts, hence in order to stimulate the student's power of accurate observation equal stress is placed upon experimental and theoretical work in chemistry. Organic chemistry and quantitative analysis are taken up in the second year and in this as well as in the first year's work careful laboratory work accompanies the lectures. The theory and practice of pharmacy is made more real by having the apparatus or preparation under discussion always at hand when possible.

The study of botany is made more interesting and practical by laboratory work, field excursions, board drawings and the lantern; while pharmacognosy is also studied with drug in hand, specimens being furnished for home study. The course in pharmaceutical Latin is especially adapted to the needs of the pharmacist. Pharmaceutical mathematics, and its application to the every-day work of the pharmacist, is too often neglected, so shall receive the attention that its importance deserves. In materia medica the action of many drugs is demonstrated in the pharmacological laboratory. Courses in the analysis of urine, gastric juice, milk and water may be elected in the senior year.

A few lectures will be given on the pharmacy laws of the state. Special lectures from time to time will be given by men eminently qualified to speak from their own experience on commercial pharmacy and subjects of special interest to pharmacists.

THEORETICAL PHARMACY

PROFESSOR TEETERS

1. This course begins with lectures considering the history of pharmacy and the text books and books of reference used. Remington's *Practice of Pharmacy* will be used as a guide and each subject carefully considered. Lessons will be assigned and recitations elucidated by apparatus used in the various processes or preparations under discussion. The composition, method of preparation, physical properties, impurities, and tests of the various substances will have attention according to importance or value in pharmacy.

Junior year, four hours each week first semester and three hours each week second semester.

2. This course is a continuation of course 1, and among important subjects discussed will be detailed consideration of inorganic and organic acids, and official salts; fixed and volatile oils and fats; alkaloids and glucosides. Especial attention is paid to the chemistry and incompatibility of the above, also physical characteristics, therapeutic properties, dose and price.

Senior year, three hours each week, first semester and first quarter, second semester.

3. The study of the prescription will be taken up in detail, incompatibility, pharmaceutical, therapeutical and chemical; solubility of ingredients, price, etc., considered, also practice in reading difficult prescriptions from photographs taken from actual prescription files and thrown on the screen.

The lectures will be followed by practical laboratory work in filling prescriptions, labeling and wrapping ready for delivery, under careful personal supervision.

Senior year, two hours each week, second quarter, second semester.

PRACTICAL PHARMACY

PROFESSOR TEETERS, MISS COOPER

1. In this course the student will make about 150 United States Pharmacopœia and National Formulary preparations, taking them up in progressive order, illustrative of the various processes used in pharmacy. Each preparation is graded separately and required to meet a reasonable standard of quantity, quality and strength. The instruction will embrace practice in the use of thermometers, hydrometers, specific gravity bottles, balances, etc. The preparation of hypodermic and compressed tablets, scale salts, pill masses, syrups, tinctures, fluid extracts, emulsions, suppositories, ointments, etc.

Each student receives a mimeograph copy of the list of preparations to be made which gives quantities and method to be employed in manufacture and serves as a guide for review.

Junior year, six hours each week throughout the year.

2. This course will consist of the manufacture of about seventy-five preparations, selecting the more difficult galenicals from the U. S. Pharmacopœia, National Formulary and special formulas and will include the preparation of many chemicals which the pharmacist should and can prepare for himself with both advantage and profit.

Senior year, laboratory course. Six hours each week, first semester.

3. This course will have especially in view practical application of knowledge gained in previous courses and will consist in applying U. S. P. tests for identity and detection of impurities in drugs; the determination of strength of official preparations made by junior students.

Senior year, combined lecture and laboratory course. Six hours each week. First quarter, second semester.

4. In this course, the compounding of prescriptions under careful individual instruction at the prescription counter, illustrative of chemical, pharmaceutical, and physiological incompatibility.

Senior year, laboratory course. Six hours each week. Second quarter, second semester.

5. The preparation of difficult official and unofficial preparations, practical prescription work and the analysis of proprietary preparations.

Third year; first semester; six hours a week.

QUIZ CLASSES

MISS COOPER

1. In connection with course 1 of Practical Pharmacy a quiz class is conducted which covers difficulties likely to be encountered in laboratory work. The composition of various preparations, with chemistry involved, and the reasons for each step in their manufacture will receive careful consideration.

Junior year, one hour each week throughout the year.

2. In connection with course 2 of Practical Pharmacy a quiz class is conducted which aims to bring out all the important points concerning the preparations made in the laboratory. Each week's work is explained in advance, giving methods, and noting especially the precautions necessary to the successful manufacture of each preparation. The composition of each and the chemical reaction which takes place is carefully considered together with uses, dosage, etc.

Senior year, one hour each week, first semester and first half of the second semester.

CHEMISTRY

PROFESSOR ROCKWOOD, ASSISTANT PROFESSOR VON ENDE,
ASSISTANT PROFESSOR KASSLAKE, MR. POORE, MR.
BROWN

9. CHEMISTRY OF THE NON-METALLIC ELEMENTS—Lectures and recitations. Junior year, first semester. Three hours each week. Mr. POORE.

10a. CHEMISTRY OF THE METALS AND THEIR COMPOUNDS—Lectures and recitations. Junior year, second semester, first quarter. Three hours each week. Mr. POORE.

10b. ELEMENTARY ORGANIC CHEMISTRY—Lectures and

recitations. Second semester, second quarter. Three hours each week. Mr. POORE.

31 (32). QUALITATIVE ANALYSIS—The time is devoted to the qualitative analysis of complex mixtures, both wet and dry processes being used. Special emphasis is laid upon applications that can be made to pharmaceutical problems. Throughout the junior year, nine hours each week. Mr. BROWN.

35 (36). QUALITATIVE ANALYSIS—General course. A laboratory course in the principles of quantitative analysis, consisting of practice in the gravimetric (first semester) and volumetric (second semester) analysis of the more simple substances, with conferences, discussions and assigned reading. Prerequisite, courses 31 (32). Throughout the senior year, three hours a week. Assistant Professor KARSLAKE.

37 (38). QUANTITATIVE ANALYSIS—Advanced course. This laboratory course aims to specialize to a considerable extent on the more difficult methods of analysis. The work is designed to give the student such general training as shall enable him to deal intelligently and successfully with analytical problems. Prerequisite; course 35 (36) or its equivalent. Assistant Professor KARSLAKE.

Throughout the year; three to fifteen hours a week. The course may be begun at the commencement of any semester.

44. ULTIMATE ORGANIC ANALYSIS—This is designed to give the student familiarity with, and practice in, the most approved methods for the quantitative determination of carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus and the other elementary constituents of organic substances. Prerequisite; courses 19 (20). Assistant Professor KARSLAKE.

Second semester; four hours a week.

45. WATER ANALYSIS—This consists of laboratory work on the qualitative and quantitative determination of the impurities in natural waters. Emphasis is laid upon the interpretation of the results in judging the potability of the water or its suitability for domestic and technical

purposes. Prerequisite; general chemistry and qualitative analysis. Assistant Professor KARSLAKE.

First semester; three hours a week.

65 (66a). TOXICOLOGY—Lectures and recitations. The physiological and chemical action of the principal poisons is considered as well as their antidotes. The methods of identifying poisons in food, excreta, etc., are explained and illustrated by experiments. Senior year, first semester, and first half of second semester. One hour each week. Professor ROCKWOOD.

49 (50). TOXICOLOGY—An elective laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating them from foods, clothing, and various complex mixtures. The postmortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, general chemistry and qualitative analysis. First or second semester. Six hours a week. Professor ROCKWOOD.

47 (48). FOOD ANALYSIS—A laboratory course in testing foods as to their purity, together with the detection of preservatives, adulterants and substitutes. Prerequisites as in 49. Professor ROCKWOOD.

First or second semester; six hours a week.

53 (54). ORGANIC CHEMISTRY—General course. Lectures, recitations and assigned readings upon the chemistry of the aliphatic and carbocyclic compounds. This aims to give the student a good general knowledge of the fundamental principles and theories of organic chemistry. Prerequisite, course 9 (10a). Throughout the senior year, two hours a week. It is accompanied by the laboratory course 55 (56). Assistant Professor KARSLAKE.

Throughout the year; ten to twenty hours a week.

55 (56). ORGANIC CHEMISTRY—Laboratory course. This consists in the preparation of a series of typical compounds of carbon together with a study of their properties, etc., in such a way as to give familiarity with the most important synthetical methods. It must be preceded or accompanied by course 53 (54). Throughout the senior year; six hours a week. Assistant Professor KARSLAKE.

57 (58). **ORGANIC CHEMISTRY**—Advanced course. This is chiefly a laboratory course dealing with a study of some of the more difficult synthetical methods and the preparation of some of the more complex organic compounds. Assigned readings and references to original articles on the special topics studied will constitute an important part of the course. It is open to graduate students. Prerequisite; courses, 53 (54), and 55 (56). Assistant Professor KAMSLAKE.

59 (60). **PHYSIOLOGICAL CHEMISTRY**—Lectures and recitations. The lectures are in explanation and amplification of the laboratory work. They include the study of the proximate principles of the body and their chemical changes, also foods and digestion, blood, milk, urine, fermentation, and bacterial products. Two hours each week throughout the year. Professor ROCKWOOD.

61. **GENERAL PHYSIOLOGICAL CHEMISTRY**—A laboratory course. The proximate principles of the body and food materials are prepared by the student and their properties and chemical changes are studied. Experiments in artificial digestion are made, their products being isolated and examined. The constituents of the blood are tested chemically and spectroscopically. First semester. Two hours each week. Professor ROCKWOOD, Mr. POORE.

62. **APPLIED PHYSIOLOGICAL CHEMISTRY**—A laboratory course. The modern methods of physiological chemistry are here used in solving problems which arise in the practice of medicine. These include such as the analysis of the gastric juice, quantitative tests being made where they are valuable for diagnostic purposes; the qualitative tests for the abnormal constituents of the urine, with the quantitative determination of such as are of importance; the identification of urinary sediments, of calculi, and of blood stains. Each student makes a complete examination of a large number of each of these, handing in written reports for correction and suggestions. Second semester. Two hours each week. Professor ROCKWOOD, Mr. POORE.

67. **THEORETICAL AND PHYSICAL CHEMISTRY**—Lectures, covering chemical statics and dynamics, thermo and electro chemistry. Assistant Professor VON ENDE.

First semester; twice a week.

69 (70). **THEORETICAL AND PHYSICAL CHEMISTRY**—Laboratory course. Courses 67, 69 and 70 may be taken simultaneously or independently. Assistant Professor von Ende.

First and second semesters; laboratory practicum once or twice a week.

BOTANY

PROFESSOR SHIMEK

1. **PLANT PHYSIOLOGY AND HISTOLOGY**—This course is designed to give the student a knowledge of the activities of ordinary plants. It embraces the study of so much of structure as is necessary to an understanding of the processes which ultimately result in the formation of organic products, among which those of professional value to the pharmacist are specially studied. The course is introductory to course 3 (4).

Junior year, first semester, two hours each week.

2. **SYSTEMATIC BOTANY**—This course consists of the study of the organography of plants with a view of acquiring familiarity with the terms and methods which are used for purposes of description and identification.

Types of the principal orders of greatest economic value are studied in detail, and special attention is given to the spring medicinal flora. In order that the student may also acquire some familiarity with the rich autumnal flora this course is continued for about four weeks in the first semester of the senior year.

Junior year, second semester. Two hours each week.

3 (4). **MICROSCOPIC TECHNOLOGY**—This course includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining, and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs, as well as in the detection of adulteration. Each student taking this

course prepares at the laboratory for his own use a cabinet of microscopic slides, illustrative of many of the more important official drugs.

Senior year. Two hours each week, throughout the year after the first four weeks.

PHARMACOGNOSY**PROFESSOR TEETERS**

1. This course will take up the history and important features of each drug, the means of identification, constituents, action, dose and official preparations.

The organic drugs of the United States Pharmacopœia will be considered in the following order: roots, rhizomes, tubers, and bulbs, twigs, woods and barks.

Due stress is given to each drug in consideration of its importance to the pharmacist.

Specimens are furnished to students for home study, and the student's ability to identify the vegetable drugs is tested.

Junior year, two hours each week, second semester.

2. A continuation of course 1. Taking up leaves and leaflets, herbs and flowers, fruits and seeds, and the vast number of miscellaneous and more important unofficial drugs.

Senior year, two hours each week, second quarter, second semester.

3. A laboratory course given in connection with course 2 in which the principal constituents of the organic drugs are studied by laboratory methods.

Senior year, about two hours a week, throughout the year.

4. The principal groups of chemical constituents of drugs as glucosides, alkaloids, etc., will be extracted from plants and carefully studied. Some attention will be given to plant analysis.

Third year, second semester; six hours a week.

PHARMACEUTICAL ARITHMETIC

Miss COOPER

The aim of this course is to teach the student to use easily and accurately the various weights and measures, the relation of one system to another in comparison with a common standard; the mutual relation of weight and volume; the calculation of strength and proportions in making pharmaceutical preparation or the dilution or concentration of substances to obtain any required result; the computation of dosage.

Junior year, first semester; three hours each week.

MATERIA MEDICA AND PHARMACOLOGY

PROFESSOR CHASE; MR. MCGREGOR, MR. WELLS

1. **MEDICAL LATIN**—Those who have had but little opportunity to study Latin before entering upon their pharmacy work will be afforded an opportunity for learning the language in this course. It will include such drill as is outlined in any good treatise upon the subject. The grammar is studied with a view of presenting those principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine. Special attention is given to pharmacopœal nouns and expressions. The prescription is taken up, its definition, synthesis, comprising form, grammatical construction, language, etc., followed by its analysis. A review of the entire work completes the course. Mr. WELLS.

2. **MATERIA MEDICA**—A knowledge of the action of drugs can be obtained by the student of pharmacy only by empirical or rational methods. Since the former, based upon clinical observation of their uses, is obviously beyond his reach, the latter, or rational method must be followed. Since this is based upon the observed or known action of drugs upon living animal cells, tissues, organs, apparatuses, etc., it is desirable that the student should be given an elementary course in physiological materia medica. To this

end the first part of the course in materia medica is devoted to familiarizing the student with anatomical structures and their functions in so far as they are related to the subject of drugs and their action.

Following the preceding the student is given preliminary definitions of the subject. The various official preparations are defined and discussed. The routes and modes of administration of remedies, and their physiological and toxicological action are likewise considered. The subjects of dosage and incompatibilities as related to prescription-writing are presented; the former finally, the latter begun, to be continued as a parallel study in the consideration of individual drugs.

The origin, source, composition, chemical characteristics, modes of preparation and of administration, and physiological action of drugs of the organic materia medica are begun.

Junior year. Two hours each week, second semester. Professor CHASE.

3. MATERIA MEDICA—The preceding course is continued. The student is required to transcribe the text begun in the preceding course and used by him as a study, in a note book specially prepared for such purpose, with a view to aiding his memory. He is also given drill in prescription interpretation. Serum-therapy, anti-toxins, organic extracts, vaccine-virus, etc., will furnish topics to be specially considered in this course. Such topics and the subjects of emergencies, and first-aid-to-the-injured and how they may be met by the pharmacist in the absence of the physician, with a final review will conclude the entire subject.

Senior year, first semester, two hours a week. Professor CHASE.

4. PHARMACOLOGY—Opportunity will be offered members of the senior class to do laboratory work in physiology and pharmacology in order to gain a practical knowledge of the physiological action of drugs. Senior year, second semester, two hours a week. Mr. McGREGOR.

PHARMACY LAW

Professor L. M. Byers, of the College of Law, will de-

liver a short course of lectures treating of the validity and construction of laws especially restraining the practice of pharmacy; of the liability of pharmacists both criminal and civil, for their own violations of laws and that of their agents. Second semester.

INSTRUCTION IN THE COLLEGE OF LIBERAL ARTS

Students of pharmacy who desire to take work in the College of Liberal Arts in addition to their work in the College of Pharmacy without being a candidate for a degree in the College of Liberal Arts, are allowed to take such work to an extent not exceeding five hours a week so long as they maintain a good standing in their pharmacy studies and do the work elected in the College of Liberal Arts to the satisfaction of the professors in charge thereof. There is no additional tuition charges for such instruction.

QUALIFICATIONS FOR GRADUATION

Every person upon whom the diploma of this college is conferred must be of good moral character, must have arrived at the age of twenty-one years, must have attended two full courses of lectures, including two full courses of pharmaceutical, microscopical and chemical laboratory practice, the last one of which shall have been completed in this college.

The degree of Graduate in Pharmacy (Ph. G.) will be granted upon fulfillment of the above conditions.

The degree of Pharmaceutical Chemist (Ph. C.) will be granted upon fulfillment of the above conditions together with the work outlined for the third year with the approval of the faculty.

WEIGHTS AND MEASURES

The State standards of weights and measures are kept at Iowa City, under the direct supervision of L. G. Weld, professor of mathematics and astronomy, and dean of the Graduate College.

MUSEUM

Pharmacists of the state are requested to send to the Pharmaceutical Laboratory, curios, such as old books, old prescriptions, old apparatus, or other material that will indicate, for educational purposes, the history and progress of pharmacy in Iowa. All such contributions will be prominently displayed in cabinets provided for the purpose and labeled with the names of the donors.

READING ROOMS

Reading and reference libraries are maintained in connection with the chemical, botanical and pharmaceutical laboratories. In the latter, the leading current drug journals are kept on file.

PHARMACEUTICAL CLUB

The scientific society of the college, known as the Mortar and Pestle Society, was organized to give an opportunity for the discussion of subjects of general and practical interest to pharmacists. Meetings are held every two weeks and all the students of the college become members by signing the constitution. It offers social and intellectual advantages and practice in public speaking.

ADMISSION TO PRACTICE

The Thirty-first General Assembly has just passed a bill which modifies the law in regard to examination for registration, as follows:

"Section 3. No person shall be eligible to take this examination until he has passed his twenty-first birthday and has presented to the commission his own affidavit and that of his employer or employers, affirming that he has had not less than four years' practical experience (including the actual number of weeks he has spent in a *reputable* college of pharmacy as hereinafter defined) as clerk under the supervision of a registered pharmacist in a drug store or

pharmacy in which physicians' prescriptions are compounded. Provided, however that graduates of *reputable* pharmaceutical schools and colleges whose entrance and graduation requirements are equivalent to those prescribed by the American Conference of Pharmaceutical Faculties for the year 1905, and whose course of study consists of two years of not less than thirty-six (36) weeks each, shall be eligible to take the examination without proof of experience as hereinbefore defined."

The College of Pharmacy of The State University of Iowa holds membership in the Conference of Pharmaceutical Faculties of The American Pharmaceutical Association and our graduates are permitted to take the state board examination without other experience than that obtained in the two years of college work.

SECURING POSITIONS.

The faculty of the University will do all in its power to aid students to secure good positions, and in this we ask the co-operation of the pharmacists of the state. In the past we have been unable to fill all the requests for thoroughly qualified graduates.

TEXT BOOKS

JUNIORS—*U. S. Pharmacopœia*, Remington's *Practice of Pharmacy*, *National Formulary*, Maisch's *Organic Materia Medica*, Wilcox's *Materia Medica and Pharmacy*, Macbride's *Lessons in Elementary Botany*, Gray's or Wood's *Manual*, Sturmer's *Pharmaceutical Arithmetic*, Crothers and Bice, *Elements of Latin for Students of Medicine and Pharmacy*, Remsen's *College Chemistry*, Cohen's *Organic Chemistry*.

SENIORS—In addition to the above, Caspari's *Treatise on Pharmacy*, Coblentz's *Hand-Book of Pharmacy*, Scoville's *Art of Compounding*.

REFERENCE BOOKS

U. S. Dispensatory, *National Dispensatory*, *King's American Dispensatory*, *Fresenius's Analytical Chemistry*,

Hoffman and Power's *Examination of Medicinal Chemicals*,
Gray's *Botanical Text-Book*, Vol. II.

Schneider's *Powdered Vegetable Drugs*, Flueckiger's
Principles of Pharmacognosy.

Sayre's *Organic Materia Medica and Pharmacognosy*.

ENTRANCE WITHOUT EXAMINATION

Students of mature age may enter without formal examination upon such studies as they may be prepared to take up, with the understanding that before they may become candidates for the degree offered by the University they shall have satisfied all entrance requirements.

ADVANCED STANDING

Students making application for advanced credit must present credentials showing that they have successfully pursued the branches in which they desire credit in a standard college or if admission to the senior class is desired they must furnish certificate showing that they have successfully passed the junior examinations in a reputable college of pharmacy.

PRIZES

LINDLY PRIZE

Mr. John M. Lindly of Winfield, Iowa, offers a prize consisting of Britton & Brown's *Illustrated Flora* to the student of the senior class who shall bring from his home county the best herbarium of not less than fifty plants. The candidate before receiving the prize must become a member of the University Pharmacy Alumni Association, and the collection shall become the property of Mr. Lindly.

ALUMNI ASSOCIATION PRIZE

The Alumni Association of the college extends a free membership to the member of the graduating class attaining the highest general average in all branches.

Awarded in 1905 to Mr. George L. Friedholdt. Daven-

port. With honorable mention of Earl Allen, Unionville, B. E. Manley, Sloan, and Henry Siebke, Durant.

MEMBERSHIP IN A. PH. A. PRIZE

Membership in the American Pharmaceutical Association is offered by Professor Wilber J. Teeters to the members of the senior class who by competitive examination is rated highest in recognition and description of organic drugs.

Awarded in 1905 to Mr. Earl Allen, Unionville, with honorable mention of George L. Friedholt.

ALUMNI ASSOCIATION

The Alumni Association takes a deep interest in the work of the college. Yearly meetings are held during commencement week and the proceedings of the association are published together with the register of alumni. Officers for 1905-6 are as follows:

President—F. W. Miller, Homestead, Ia.

First vice president—B. E. Manley, Sloan, Ia.

Second vice president—J. H. Novak, Iowa City, Ia.

Recording secretary—J. M. Lindly, Winfield, Ia.

Corresponding secretary—W. F. Junger, Reinbeck, Ia.

Treasurer—J. A. Farley, Iowa City, Ia.

Executive board—W. F. Webbles, Davenport, Ia.; W. L. Walters, Wellman, Ia.; Zada M. Cooper, Iowa City, Ia.

**STUDENTS IN ALL THE
COLLEGES**

THE COLLEGE OF LIBERAL ARTS

DEGREES CONFERRED JUNE, 1905.

BACHELOR OF ARTS

Allstrand, Mae Belle	Metzger, Belle Agnes
Call, Merlyn Bush	Metzger, Della Elizabeth
Davies, Robert Geiser	Miller, Grace May
Emmert, Max Washabough	Ross, Carl Wesley
Gabriel, Grace Ethel	Sebern, Nellie
Gordon, Arthur Clarkson	Soesbe, Carrie May
Griffith, Dwight Moody	Sunier, Bertha
Kerstetter, Susan	Van der Zee, Jacob
Long, Cecile Florence	Waterbury, Ella Botts
McClintock, Calvin Terry	West, Philip Cecil
Main, Herman Charles	Williams, Mary Florence

BACHELOR OF PHILOSOPHY

Allen, Burritt Steward	Hill, Eddy Cecil
Anderson, Harold Charles	M. Di., 1900, Iowa State Normal
Ballard, Mary Elizabeth	Hinkle, Bessie Catherine
Berner, Edna Louise	Hinkle, Jessie Ellen
Boies, Harry Edward	Hoar, Mary Elizabeth
Brown, Earl	Holmes, Grace Maude
Buffum, Mary Susan	Hutchinson, Everett Ross
Burnquist, Bert Blaine	Hutchinson, Martha
Chase, Nellie Althea	M. Di., 1899, Iowa State Normal
Crane, Agnes Mae	Kimple, Mae Belle
Davis, Odin Royston	Lynn, Margaret May
Dunlap, Fanny	McClenahan, Perry Eugene
Fay, Wylie Webb	M. Di., 1899, Iowa State Normal
Files, Ray	McCullough, Clara Elizabeth
Gordon, Pearl Avis	M. Di., 1903, Iowa State Normal
Heard, Mary Kathrina	McVay, Mary Alice
Ph. C., 1892, University of Michigan	

Moler, Ida Muriel	Swaine, Robert Taylor
Moling, Lura May	Thompson, Elizabeth
Morgan, Frank Sonum	Veblen, Gertrude Ingeborg
Nichols, Ethel Gay	Veblen, Signy Arndora
Parish, John Carl	Waldron, Alice Margretta
M. Di., 1902, Iowa State Nor- mal	Walker, Laura
Quigley, Edward Gross	Wiley, Stella Lucile
B. Di., 1900, Iowa State Nor- mal	Williams, Etta Louise
Rink, Clarence William	Wilson, Clara Rosa
Roberts, Jennie Ellen	Wolf, Bertha Sarah
Robinson, Agnes Louise	Wright, Luella Margaret
Skelley, Silas Emmett	M. Di., 1901, Iowa State Nor- mal
Smith, Matilda Annie	Wyland, Benjamin Franklin
Snedicor, Fred Elwyn	Yule, Anna May

BACHELOR OF SCIENCE

Achenbach, E. Beth	Patton, Ruby Emma
M. Di., 1902, Iowa State Nor- mal	Phelps, Henry Hurst
Brinton, William Thomas	Pickett, Mrs. Lena Elson
Daum, Philip Hugh	Randall, Ray
LL. B., 1901	Struble, Isaac Irving
Finkbine, Robert Hoyt	Wallin, Ivan Emanuel
Goodwin, James Edwin	Watson, Emery Earnest
Griffith, Mary Caroline	M. Di., 1901, Iowa State Nor- mal
Louis, Anna	Wille, Otto Victor
Mark, Edward William Bar- tholomew	Wright, Arthur Hemmerling
M. Di., 1900, Iowa State Nor- mal	M. Di., 1903, Iowa State Nor- mal

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Aardappel, Walter	Miller, Dalton Giles
DeHart, Otto Dell	Shaw, John Austin
Danielson, Henry Clarence	Siemen, Edward Anthony
Landers, John Clement	Whitacre, Max
Marick, George Louis	Young, Hugh Edward

BACHELOR OF DIDACTICS

Joy, Florence Livingston	Shaffer, Nina Rebecca
B. Ph., 1903	B. Ph., 1899
McGuire, Mary M.	Slavata, Jennie Elizabeth
B. S., 1895	B. Ph., 1901

STUDENTS—THE COLLEGE OF LIBERAL ARTS 501

DEGREES CONFERRED JULY 28, 1905

BACHELOR OF ARTS

Edinger, Paul Frederick

BACHELOR OF PHILOSOPHY

Kalkofen, Emma E.

Knauer, Eda Dorothea

BACHELOR OF SCIENCE

Christiansen, James

FOURTH YEAR

Adams, Mary Annette		Shelby
Albright, George Carter		Danville
Atherton, Loren George	L. A. & Law	New Sharon
Baird, Justus Nathan	L. A. & Law	Keosauqua
Baldwin, Norah		Keswick
Banta, George Sherman		Manchester
Battles, Perle Mae		Maquoketa
Bean, Arthur Neal		Eagle Grove
Beauchamp, Bertha Ewing		Bedford
Blum, Effie Clare		Rossville
*Boss, Clara Atwood		Ames
Erant, Lucy Winifred		Iowa City
Breece, Garfield Eugene	L. A. & Law	Iowa City
Brinton, Edward Arthur		Iowa City
M. D., 1902, Iowa State Normal		
Brown Augusta		Wall Lake
Burge, Edith		Iowa City
Burkheimer, Ira Arthur		Creston
Burrell, Jay Sanford		Jesup
Burton, Clifford Edgar		Yorktown
Carroll Frances Alma		Harlan
Chase, Olive Merrill		Waterloo
Cleveland Ray Eli		Cedar Falls
M. D., 1904, Iowa State Normal		
Cooper, Frederick Richard		Ottumwa
Coulter, Wilbur Edwin	L. A. & Med.	Burlington
Curtis, Edith Hannah		Allison

M. D., 1895, Iowa State Normal

***Projected registration.**

De Sellem, Anna Louise		Iowa City
Darland, Grace		Iowa City
Davidson, Lois Craig		Estherville
Davidson, Orin Victor		Burlington
Davis, Deborah		Otranto
M. D., 1897, Iowa State Normal		
Doll, Clara		Iowa City
Douglass, Francis Luther		Iowa City
Dow, Harry Earnest		Denmark
Duncan, Cleveland Reuben	L. A. & Med.	Iowa City
Ebersole, Edwin Christian		Iowa City
Fitz, Earle Moore	L. A. & Law	Panora
Fitzgerald, Edward Clarence		Rock Rapids
Frazier, Zoe Rae		Nevada
French, Hiram Earl		Humboldt
French, Royal F.	L. A. & Med.	Humboldt
Fritzel, Carl C.	L. A. & Law	Conrad
Gardner, Roy Lawrence		Dudley
B. S. D., 1902, Missouri State Normal		
Goetz, Antoinette Helen		Iowa City
Haldeman, Virginia Morning		Iowa City
Hayes, Fannie Belle		Denison
Healy, William	L. A. & Law	Lisbon
Henke, Louis	L. A. & Law	Greene
Hutchison, Raymond Orrin		Lake City
Illick, John Theron		Burlington
Isherwood, Genevieve		Le Claire
Jacobs, Sadie		Burlington
Jamison, Jeannette		Burlington
*Johnson, Thomas E.		Bode
Jones, Pamela Pearl		Cherokee, Kas.
Jones, Ralph Emerson	L. A. & Law	Williamsburg
Jones, Wata Jane		Iowa City
Joy, William Bixby	L. A. & Law	Iowa City
Kalkofen, William Henry		Decatur City
Kelley, James Madison	L. A. & Law	Macedonia
King, Lylas Sarah		Grundy Center
Knapp, Carl William		Dubuque
Kruse, Paul Jehu		Boone

* Projected registration.

STUDENTS—THE COLLEGE OF LIBERAL ARTS 503

Lancaster, Alice May		Le Claire
Leach, Robert Lyman		Adel
Lemon, Frank Carl	L. A. & Law	Guthrie Center
Luse, Eva May,		Ross
M. D., 1904, Iowa State Normal		
McAuliff, Leslie M.		LeMars
McBride, Sara Elizabeth		Keokuk
McIntire, Fay		Ottumwa
McKinley, Frederick William		Clermont
Marsh, Ruth Maria		Charles City
Marshall, Florence Rose		Cresco
B. D., 1898, Iowa State Normal		
Merritt, Mabel Clough		Iowa City
Middleton, William Drummond		Davenport
Miller, Margaret Jane		Iowa City
Mingus, Florence Mary		Iowa City
Moore, Fred		Harlan
Morris, Winifred		Indianola
Mueller, Louis Francis		Iowa City
Nelson, Bendiks John		Ellsworth
Ogden, Elizabeth Jane		Williamsburg
Pahlas, Henry Martin		Elkader
Parish, Jessie Augusta		Iowa City
M. D., 1905, Iowa State Normal		
Patterson, Jewell Morris		Iowa City
Paulson, Caroline H.		Britt
Paulus, Martha Ann		Iowa City
Payne, Paul Marvin	L. A. & Law	Linden
Pentecost, Verne Reynolds		Panora
Pingrey, Lucy Olive		Estherville
B. D., 1899, Iowa State Normal		
Portlock, Beth M.		New London
Price, Hiram T.	L. A. & Law	Iowa City
Price, Mildred		Iowa City
Redfield, Roy Addis	L. A. & Law	Ruthven
Reherd, Mary Louise		Iowa City
Rider, Thomas Thiel	L. A. & Dent	Iowa City
Rinker, Purly	L. A. & Law	Seymour
Royal, Myrtle Emeline		Des Moines
Ruby, Sarah Amelie		Lake Mills
Schall, Elias Freeman		West Liberty
Schultz, Clara Mary		Burlington

Shedd, Verna May	Council Bluffs
Sherwood, Elizabeth Julia	Iowa City
Showalter, Mary Ellen	Council Bluffs
Shrimplin, Jessie C.	Mt. Ayr
Smith, Franklin Orion	Cedar Falls
M. Dl., 1903, Iowa State Normal	
Stearns, Robert William	L. A. & Med Webster City
Steere, Kenneth David	Iowa Falls
Stone, Edna Pearl	Burlington
Stookey, Marion	Leon
Strange, Joanna Glead	Sioux City
Swanson, Julia Elmida	Webster City
*Thornburgh, William Burton	Seymour
B. S. Dl., 1898, Missouri State Normal	
Tweed, Horace Anthony	Forest City
Volland, Mrs. Mabel Montgomery	Iowa City
B. Dl., 1899, Iowa State Normal	
Wachs, Anna Frances Rosaline	Iowa City
Wallace, Arthur Clarence	L. A. & Law Rock Rapids
Weber, Eva	Corning
West, Mary Parsons	Sioux City
West, Myrta Gertrude	Irwin
Wharton, Ralph Waldo Emerson	Franklin
Whedon, Arthur De Wett	Iowa City
Woods, Mary Louise	Iowa City
Yule, Mildred Rebecca	Tipton

THIRD YEAR

Adams, Nina Elsie	Shelby
Allen, Anna	Montezuma
Alt, Grace E.	Iowa City
Anders, Mae Corinne	Iowa Falls
Bailey, Sadie Lydia	Iowa City
Barnes, Harlan Ward	Eagle Grove
Beatty, Ralph Erwin	Tipton
Beebe, Ethel Effie	Wever
Bevins, Nathan Sidney	Hawkeye
Boyce, Mary Mabel	Iowa City

* Projected registration.

STUDENTS—THE COLLEGE OF LIBERAL ARTS 505

Bracewell, Edna	Allerton
Brainerd, Howard Hatch	Iowa City
Bridgens, John Guy	Eldora
Buckley, Grace Emma	Shelby
Butterworth, Julian Edward	Dows City
Churchill, Edward Perry	Allerton
Clark, Dan Elbert	Sioux City
Claussen, Anna Dorothy	Shelby
Conner, Florence Gertrude	Waterloo
M. Dl., 1903, Iowa State Normal	
Corso, Ignatia	Iowa City
Coyle, Claude Ham	Humboldt
Crockett, Grace Cathryn	Iowa City
Cunningham, Fred Joseph	Allerton
Dalley, Avice Evelen	Waterloo
B. Dl., 1903, Iowa State Normal	
Easton, George Eugene	Strawberry Point
Edwards, Alice Mavor	Waterloo
Farnum, Mrs. Eva Crane	Mason City
*Ferguson, Rose	Cherokee
B. Dl., 1898, Iowa State Normal	
Fleseler, Mary Alice	Iowa City
Frazier, Sebens Schoonover	Nevada
French, Raymond Albert	Glenwood
Fullerton, Robert Parsons	Des Moines
Gepson, Edward D.	Dunlap
B. Dl., 1899, Iowa State Normal	
*Gibson, Ezra Nelson	Centerville
B. Dl., 1898, Iowa State Normal	
Gittins Gertrude	Williamsburg
Glass, Remley John	Mason City
Godown, Elmer	Linden
Green, John Reuben	Onslow
Gripenburg, Milf Menken	Kingsley
Griffith, Grace	Iowa Falls
Heinsius, Cecil Mercedes	Iowa City
Hemsing, Maurice Abreo	Stoughton, Wis.
Hodge, Katherine Juliana	Maquoketa
Holiday, Sadie Gregg	Burlington
Holmes, Anna Ann	Waterloo
Hrbek, Jeffrey Dolezal	Cedar Rapids

*Projected registration.

Kacherian, Hovhannes Sarkis, L.A. & Med.	Sevas, Turkey
Kern, Edna	Iowa City
King, Albert Darius	Iowa City
M. Dl., 1903, Iowa State Normal	
Kurz, Emma Bernadine	Morning Sun
Landon, Pearl May	New Hampton
Latchem, Louise May	Washington
Lawson, Jennie Loraine	Corydon
Loizeaux, Cecelia Adelaide	Des Moines
Lorenzen, Lorenz	Denison
McEachron, Annie Mary	Williamsburg
McGowan, Mollie Palmer	Clear Lake
Maynard, Mignon J.	Council Bluffs
Mercer, Carrie Pearl	Iowa City
Merrill, Dayton Eugene	Bear Grove
Milner, Robert Sidney	Belle Plaine
Newcomb, Gertrude Kimball	Shell Rock
O'Brien, Edith Frances	Iowa City
Odell, Florence Margaret	Churdan
*Olen, Hubert Leonard	Paullina
Oliver, Ralph Addison	Onawa
Otis, Caroline N.	Boone
M. Dl., 1897, Iowa State Normal	
Perrine, Peter Ralph	Burlington
Pugsley, Frank Garfield	Toledo
Remley, Agnes	Anamosa
Remley, Alice	Iowa City
Reynolds, Beatrice Bartlett	Brayton
*Rhoads, Luke Caldwell	Clarksville
M. Dl., 1902, Iowa State Normal	
Riemcke, Charles August L. A. & Med.	Muscatine
Ph. G., 1903	
Riley, Will Francis	Burlington
Rittenmeyer, Adelaide Alice	Iowa City
Ritz, Philip Embury	Sergeants Bluffs
Rorick, Elroy Edward	West Branch
Scheel, Adolph Bernhardt	Remson
Scroggs, Thomas Berryhill	Beresford, S. Dak.
Seydel, Fred	Iowa City
Sheldon, Celia Helen	Victor

*Projected registration.

STUDENTS—THE COLLEGE OF LIBERAL ARTS 507

Sies, Raymond William

Stoner, Dayton

Swisher, Alice

*Sylvester, Reuel Hull

M. Ed., 1904, Iowa State Normal

Treimer, Anna

Tyler, Grace Clarissa

Van Ness, Orpha May

Vasku, Frank

Vestal, Clarence Leroy

Waterbury, Flora Avis

Watters, Carrie Charlotte

White, Abigail Elviro

White Tullius Vernon

Williams, Leigh Lawrence

Willis, Earl Clifton

Wilson, Malcolm Earl

Woodworth, John Melvin

Yocom, Alice Emily

Cedar Rapids

Iowa City

Iowa City

Malcom

Dixon

Columbus Junction

Centerville

Bendon, S. Dak.

Warsaw, Ill.

Iowa City

Irwin

Wellpinit, Wash.

Iowa City

Iowa Falls

Clarksville

Rock Rapids

Ida Grove

Oskaloosa

SECOND YEAR

Abrams, Adah Louvae

Alcorn, Glen

Andersen, Anne Marie Kathryn

Arnold, Floyd Henry

Ball, Edith

Bammer, Samuel George

Barrow, Mary Modestas

Beem, Joe Spencer

*Blakely, William Henry

Branson, Pearl Gertrude

Brant, Irving Newton

Brennan, Clara Anna

Brinton, Grace

Brown, Andrew Dobbie L. A. & Med.

Brown, George

Burgess, Joseph Henry

Buxbaum, Katherine Louise

Clark, Anna Bessie

Cobb, Edwin

L. A. & Med. Independence

Iowa City

Perry, Okla.

Lyons

Manchester

Iowa City

Hamburg

Iowa City

Marengo

Livermore

Iowa City

Iowa City

Iowa City

Iowa City

Atlantic

Wilton

Cresco

Washington

Maquoketa

* Projected registration.

Cozine, Edna Mable	Iowa City
Crawford, Nelson Antrim, Jr.	Council Bluffs
Cross, Lillian Pearl	Vinton
Daniels, William Harrison L. A. & Med.	Williamsburg
Davis, Charles Franklin	Iowa City
Dennis, Gertrude	Iowa City
Duncan, William Homer	Iowa City
Dvorsky, Lillian Frances	Iowa City
Efnor, Odessa Grace	Monroe
Elliott, Leroy Patton	Iowa City
Field, Agnes Jeannette	Humboldt
Fisher, Nellie Delilah	Troy Mills
Friedline, Orie	Ida Grove
Gallaher, Ruth Augusta	Arlington
Gordon, Willard Benedict	Iowa City
Grandrath, Elesa Margaret	Iowa City
Green, Catherine Mary	Sioux City
Grissel, Jeannetta	Iowa City
Guidinger, Alsadie Marie	Northwood
Hands, Elsie	Iowa City
Hanke, Ella Sophia	Iowa City
Hansen, Margaret Emma	Missouri Valley
Hartnell, Raymond Samuel	Gaylord, Mich.
Harwood, Herbert Macy	Des Moines
Herrick, Charles Ernest	Exira
Hayes, Agnes J.	West Liberty
Hoar, Herbert Henry	Iowa City
Hobart, Tenney May	Cherokee
Holland, Regina Agnes	Iowa City
Hooley, Margaret Ellen	Nichols
Hooley, Rose Leona	Nichols
Hotz, William Joseph	Iowa City
Howell, John William	Eagle Grove
Johnston, William Samuel	Estherville
Jones, William Elwyn	Nashua
Kennedy, Jennie Mae	Iowa Falls
Kent, Maurice Allen	Marshalltown
Knerr, Ina Helen	Allerton
Long, Robert Elmer	Brooklyn
Luce, Charles Elmo	Nashua

STUDENTS—THE COLLEGE OF LIBERAL ARTS 509

Lynch, Florence Josephine	Sioux City
Lynch, John Irvin	Iowa City
B. Dl., 1900, Iowa State Normal	
Lyon, Myra	Iowa City
McIntosh, Lachlan Arthur	Rochester
McManus, Frank Paul	Iowa City
McNeely, Ella Beatrice	Burlington
McRaith, Abigail Loretta	Iowa City
Macbride, Philip Douglas	Iowa City
Macomb, Ida May	Paullina
Marolf, Louis Charles	Wilton Junction
Mickelson, Elizabeth Angeline	Webster City
Miller, Herschel Frederick	Belmond
Miller, Mary Jayne	Iowa City
Moeller, August Lenzen	Denison
Moon, Arnold Robert	L. A. & Med. Williamsburg
Moore, Marguerite	Traer
Mortland, Maizie	Montezuma
Mueller, Margaret Mary	Iowa City
Mulnix, Margaret Ione	Dows
Murphy, Bernard Vincent	Ida Grove
Murray, John Adolph	Little Sioux
Myers, Frank Martin	Beaman
Myers, Walter Lawrence	West Branch
Nebe, Edith Maie	Glenwood
Oehler, Lucile	Iowa City
Oliver, Marcus Solomon	Onawa
Paulus, Mary	Iowa City
Person, Elvero Hildegard	Wallingford
Pike, Robert Baxter	Whiting
Pond, John Emerson	Monticello
Remley, Robert Glass	Anamosa
Royal, Wilmot Kingsbury	Des Moines
Schichtl, Caroline Magdalene	Algona
Schwimley, Nellie Ethel	Iowa City
Sherwood, Winifred Whitman	Iowa City
Skinner, De Nora	Sioux Rapids
Sloat, William Eugene, Jr.	Denmark
Smith, Stella Mabel	Harlan
Sondrol, Thorkel Eugene	Clear Lake
Spangler, S. T., Jr.	Winthrop

Sparks, Bertha E.		Iowa City
Stimson, Margaret May		Conway
B. D.L., 1903, Iowa State Normal		
Stockdale, Verne Katherine		Iowa City
Stouffer, Theta Beryl		Iowa City
Sweet, Hazel Marie		Sioux City
Swire, Edith Margaret		Iowa City
Thompson, Margaret Adelaide		Iowa City
Topping, Clyde Hamilton		Burlington
Trueblood, Jennie Lind		Lincoln, Neb.
Vaala, Alice Wilhelmina		Saude
Vandenburg, Bessie		Armstrong
Vogt, Helen Marie		Iowa City
Wallin, Florence Elvira		Stanton
Wilkinson, Harry Blaine	L. A. & Med.	Brooklyn
Wille, Frieda Dora		Iowa City
Willis, Theodore Alan	L. A. & Med.	Iowa City
Worster, Mary Jo		Adel
Wright, John Robert		Knoxville
Wyland, Alma Jane		Harlan
Yavorsky, Irene Caroline		Iowa City

FIRST YEAR

Adams, Harold Montford		Shelby
Ainsworth, Mary Agnes		Oelwein
Anderson, Nina Jeannette		Harlan
Anspach, Jacob Charles		Walnut
Baines, Margaret May		What Cheer
Barry, Agnes Mildred		Iowa City
Barry, Josephine Mary		Iowa City
Barry, William James	L. A. & Med.	Iowa City
Bates, Flossie Anna		Fontanelle
Bentley, Glen Irene		Oelwein
Bernatz, Albert Howard		West Union
Bickley, G. G.	L. A. & Hom. Med.	Waterloo
Bissell, Blossom		Independence
Blake, Jennie Isabel		Iowa City
Blakely, Cliff Leonard		Montezuma
Bowen, Mabel Meardon		Iowa City
Bowen, Mary Charlotte		Waukon
Boylan, Bert Caleb		Waucoma

STUDENTS—THE COLLEGE OF LIBERAL ARTS 511

Breese, Laurette Moselle		Iowa City
Briggs, Charles William		Wapello
Brink, Charles Clifton		Doon
Brown, Burr Arthur		Waterloo
Brown, Sidney Raymond		Britt
Bryan, Arthur Lynn	L. A. & Med.	Forest City
Buckner, Chester Arthur		Iowa City
Burgeson, Evan Gerald		Kensett
Burgy, John Everett		Marengo
Cameron, James Lloyd		Audubon
Carberry, William Lawrence		Panora
Carl, Evan Elsworth		Nichols
Carpenter, Mary Margaret		Columbus Junction
Carroll, Frank Maxwell		Harlan
Cerny, Elsie Marie		Iowa City
Chamberlain, Sylvia Anna		Grinnell
Clark, James George		Waverly
Cobb, Elliott Cunningham		Harlan
Collins, Benjamin Palmer		Livermore
Converse, Myra Harriet		Iowa City
Cook, Robert Jay	L. A. & Med.	Independence
Cooper, Flora Evelyn		Council Bluffs
Cress, Earl Elliott	L. A. & Med.	Riverside
Crockett, Hazel		Iowa City
Cutler, Elizabeth		Centerville
Danforth, Lucile Bine		Winterset
Dunham, Frank Clark		Estherville
Dunkelburg, Ralph Alan		Waterloo
Eaton, Guy Wells		Waukon
Elliott, Maud Ellen		Iowa City
Epps, Joseph Earl		Ottumwa
Ferguson, David Herman		New Hampton
Ferguson, Maud Luella		Ida Grove
Field, Herbert Oscar		Ainsworth
Fillenwarth, Arthur Theodore		Britt
Fisher, Elmer George		Underwood
Flickinger, Reed Adams		Council Bluffs
Frazer, George Enfield		Anamosa
Freese, Grover Cleveland		Adair
Frum, Mary Alice		Shelby
Gabriel, Myrtle Anne		Des Moines

Gardner, Olive Elizabeth		Audubon
Garlock, Irma Edna		Fort Dodge
Gehlen, Viola Catherine		Le Mars
George, Libbie		Monticello
George, Thomas James		Monticello
Greer, Edna Mary		Iowa City
Griffith, J. Edwin		Iowa Falls
Grissel, Ella Mary		Cedar Rapids
Hall, Avis Mary		Hawarden
Hamilton, Birdie May		Iowa City
Hanzlik, Paul John		Cedar Rapids
Ph. G., 1902		
Hayes, Helen Lucile		Denison
Hayes, Mary Naomi		Tampa, Fla.
Heery, Lydia Barnard		Clarksville
Henick, Anna Gertrude		Iowa City
Henley, Jesse van Fleet		Davenport
Hennessy, Ethel Irene		Iowa City
Hickenlooper, Edna		Iowa City
Hill, Louis L.		Nashua
Himes, Amy Lawrence		Elkader
Himmelblau, David		Charles City
Hobson, Ida Neeb		West Union
Hollman, John Carl		Iowa City
Holman, Clara Isadore		Mason City
Holman, Meda May		Rockwell
Hopkins, David Howell	L. A. & Med.	Des Moines
Howard, Glen Prosper		Harlan
Hruska, Libbie Mae		Cedar Rapids
Huff, John James		Muscatine
Hughes, Llewellyn Williams		Red Oak
Hyter, Sidney Samuel		Wever
Ingvoldstad, Richard		Decorah
Ingham, Arthur Blaine		Washington
Jacobson, Benjamin Louis		Des Moines
Jamieson, Margaret Jane		Ida Grove
Jefferson, Sue Marie		Clinton
Jones, Nellie		Iowa City
Jones, Robert Newton		Iowa City
Joyce, Catherine Gaynard		Agency
Kampmeier, Fred Otto	L. A. & Med.	Iowa City

STUDENTS—THE COLLEGE OF LIBERAL ARTS 513

Kelley, Leo Raymond	Waterloo
Kelty, Earl	Vinton
Keppler, Dora Pauline	Iowa City
Keyser, Mae Miranda	Marengo
Kiger, Carl Dalton	Britt
Kile, William Emanuel	Audubon
King, Ora Frances	Iowa Falls
Kline, Ralph Glenn	L. A. & Med. La Porte City
Knease, Tacie Mary	Oasis
Knerr, Karl Corbett	Allerton
Knowlton, Will Perry	Decorah
Koontz, Edyth Marie	Iowa City
Le Compte, Karl Miles	Corydon
Lieb, Otto Vincent	Westphalia, Kas.
Loehr, Clement Leslie	Lone Tree
Long, Edna Grace	Tiffin
Long, Mary Regina	Indianola
Lorenz, Jay William	Rockford
Lovell, Catherine Eldred	Monticello
Lynch, Laura Candace	Des Moines
Lyon, Elsie Ganson	Iowa City
Malone, George Simon	Mt. Ayr
Manney, Alice Emmons	Marshalltown
Marz, Katherine Eleonore	Homestead
Masson, Mary	Washington
Masson, William John	Washington
Mather, Lydia Jeannette	Springdale
Mathieson, Kfirstine Aneta	Harlan
Michels, Mary Magdalene	Ida Grove
Miller, Mary Elizabeth	Stacey, Mont.
Monroe, Neal Michener	Harlan
Morford, Elvira Maude	Iowa City
Moses, John	Decorah
Mueller, Alice Floyd	Davenport
Nalden, Veva Gertrude	Woodward
Nasby, Nilsine Laurine	Estherville
O'Connell, John F.	Des Moines
Oakes, James Leo	Clinton
Ogle, Eva May	Iowa City
Olsen, Forrest Bernell	Lake Mills
Olson, Oliver Malvin	Alta

Otto, Helen	Iowa City
Owen, John Richard	L. A. & Med. Anamosa
Pattee, Joseph McKendrick	Harlan
Penningroth, Charles	Tipton
Perrine, James Owen	Burlington
Pond, Margaret Louise	Monticello
Poore, Pearle Marie	Bird Island, Minn.
Portlock, Kineta de France	New London
Rate, Laura Frances	Iowa City
Reever, Alice May	Laurens
Royal, Jessie Corinne	Des Moines
Schictl, Julia Ann	Algona
Schmidt, Meta Erna	Marshalltown
Schultz, Mildred Francis	Burlington
Seitsinger, Laila Fern	Iowa City
Seydel, Blanche	Iowa City
Seymour, Henrietta	Ottumwa
Shalla, Mabel Vivian	Iowa City
Shipman, Martha Irene	Iowa Falls
Shimek, Bertha	Iowa City
Shimek, Ella	Iowa City
Silver, Elizabeth	Sioux City
Smallpage, Lafayette John	Parkersburg
Smith, Claude Eldon	Ida Grove
Smith, Cora Belle	Stuart
Smith, Harry Pearse	Manchester
Smith, Raymond Ellson	Ida Grove
Stach, Alice Teresa	Iowa City
Starzinger, Vincent	Des Moines
Strawbridge, Jessica Elizabeth	Sigourney
Swire, Roger, Jr.	Iowa City
Swisher, Helen	Iowa City
Swisher, Pauline	Iowa City
Talbott, Sara Amelia	Marengo
Titus, Grace Mabel	Otranto Station
Tovey, Idylene Mabel	Des Moines
Usher, Pearl Editha	Nashua
Van Metre, Edward Marion	Tipton
Van Metre, Virginia	Waterloo
Varney, Clara	West Branch
Vestal, Franklin Earl	Warsaw, Ill.

STUDENTS—THE COLLEGE OF LIBERAL ARTS 515

Waller, Florence Estelle
Wilson, Alice Caliste
Wilson, Nellie Elizabeth
Woodruff, E. B.

Charles City
Waterloo
Washington
Correctionville

SPECIAL

Anderson, Clara Lenora
Barrow, Ida Gertrude
Broderick, Mary Florence
Cassady, Edward Mike
Dixon, Charles Bert
Enright, Ada Eva
Harden, Arthur Abraham
Harden, Emmett Sydney
Harris, Curtis
Haynes, Fritz Felkner
Howell, Carlisle George
Johansen, Fred Will
Kirk, Carroll Nathan
Lawson, Homer Noel
McCulloch, Roy M.
Miller, Roy
Nickolaisen, Rose Nicola
Otis, George Stanley
Parke, Leland Stanford
Pflaum, Paulyne Fredericka
Smith, Gertrude Edna
Utterback, Earl Roscoe
Waterbury, Mabel
Wright, Roberta

Ossian
Iowa City
Iowa City
Whiting
Washington
Menlo
Casey
Casey
Akron
Centerville
Eagle Grove
Gladbrook
Marshalltown
Wesley
Pomeroy
Independence
Moorehead
Monona
Paullina
Des Moines
Iowa City
Iowa City
Dayton
Fort Dodge

UNCLASSIFIED

Almy, Maurice Augustus
Andrews, John Walter
Bain, Elizabeth Jane
B. D.L., 1898, Iowa State Normal
Baldwin, Flora
Ball, Mrs. Maud Young
Barry, Adelaide Nellie
Becker, Wilhelmina M.
Bradley, Carolyn Margaret

Sterling, Ill.
Pomeroy
Webster City

Keswick
Iowa City
Iowa City
Hubbard
Iowa City

Brady, William J.	Iowa City
Brown, William Ebenezer	Tipton
Bruce, Robert Cameron	Minneapolis, Minn
Burge, Jennie	Iowa City
Burns, Margaret Mary	. Quick
Burton, Mrs. Verna Scott	Oelwein
Carpenter, Porter Harman	Iowa City
Claire, Clara Frances	Iowa City
*Clark, Alice	Iowa Falls
Clark, Mrs. Hattie Young	Iowa City
Conaway, John Wesley	Marcus
Corbett, Thomas Francis	Iowa City
Crossan, John Wesley	Eldora
Cullison, Shelby	Harlan
Davies, Mrs. Alice Raines	Iowa City
Davis Margaret Belle	Paris
Delmege, Maude	Des Moines
Donovan, Michael Leo	Oxford
Dunham, Marcia Orintha	Troy, N. Y.
Eells, Harry Leroy	New Hampton
Eichhorn, Charles Raymond	Atlantic
Elson, Jennie	Lineville
Elson, Mae	Lineville
Ende, Henry Leopold von	Burlington
Fink, Anna Bertha Clara	Des Moines
Fousek, Charles Karel Bretslav	Vega, S. Dak.
Garmon, Dora O.	La Porte City
Gray, Velma Florence	Cedar Falls
Gutz, Walter	Pomeroy
Haldeman, Henry Moderwell	Iowa City
Hallahan, Daniel	Pomeroy
Halton, Lawrence Clyde	Ottumwa
Hastings, Irving Carroll	Spencer
Healy, James Peter	Inwood
Hershey, Mrs. Hattie Maude	North Platte, Neb.
Hervert, Amelia	Iowa City
Hickenlooper, Fred Guest	Iowa City
Higgins, Thomas Jefferson	Grand Junction
Hirsher, Mayme	Iowa City
Holbert, Anna C.	Iowa City

* Projected registration.

STUDENTS—THE COLLEGE OF LIBERAL ARTS 517

Houghton, Paul	Hedrick
Howard, James M.	Nashua
Huff, Mrs. Emma D.	Iowa City
Hunter, Elizabeth Ann	Iowa City
Jaynes, Mrs. Anna Maud	Iowa City
Johnston, Mabel Harriet	Ida Grove
Jones, Laura M.	Iowa City
Jones, Lawrence Clifton	Marshalltown
Joy, Blanche Edina	Iowa City
Kelly, Catherine	Sigourney
Koebel, George Pendleton	West Bend
Koser, George Doner	Iowa City
Larson, Dora Marie	Audubon
Lewis, Charles Marvin	Macedonia
Luse, Clara Etta	Ross
*Mahannah, Frank Laban	Traer
McCormick, Margaret Colette	Churdan
McCulloch, William James	Nashua
McDonald, Timothy Emmett	Van Horn
McInnerny, Genevieve Mary	Iowa City
Matthews, Ora Ermina	Olathe, Kas.
Merritt, Maude	Ottumwa
Meyer, Frank	Orange City
Miles, Donald Webster	Salem, Ore.
Miller, Harry Wesley	Cedar Rapids
Muench, Virgil Orin	Pilate Mound
Nebe, Katherine Louise	Glenwood
Parish, Ruth Ella	Iowa City
Phillips, Philip Percy	Ottumwa
Piggott, Lee Ayres	Hamilton, Ill.
Poland, Edna Mae	Iowa City
Randall, Addie Belle	Denison
Randall, Winfield Scott	Denison
Renshaw, Fred Earl	Inwood
Sample, Alta Belle	Iowa City
Scallon, Joseph John	Ackley
Schimke, Daniel E.	Odessa, Wash.
Schofield, Leo Nelle	La Porte City
Schrunk, Francis Thomas	Osterdock
Siepert, Albert Frederick	Chippewa Falls, Wis.

* Projected registration.

Sime, George Franklin	Northwood
Slade, Albert Arthur	Tiffin
Sorenson, Anna Marie	Hampton
Spence, William Everett	Milton
Stein, Sarah Elizabeth von	Iowa City
Stockdale, Ella Naoma	Iowa City
Straub, George Warren	Tipton
Thomann, Albert Jacob	Brighton
Thomas, Henry David	Gilmore City
Thompson, Margaret	Armstrong
Thompson, Effie Louise	Iowa City
*Thorson, Thorwald	Forest City
Tucker, Lloyd Russell	Marseilles, Ill.
Updegraff, Curtis G.	Sigourney
Waite, Pearl Hortense	Iowa City
Walker, Mrs. Elvira Lewis	Iowa City
Waller, Pearl A.	Charles City
Weeks, Rex	Wichita, Kansas
White, Helen Grace	Iowa City
Wolfe, Glea Ione	Iowa City
Wood, Adelia Marilla	Iowa City
Wise, Ray Harvey	Paton
Wood, Mildred Grace	Iowa City
Worley, Leslie Oren	Iowa City
*Yeager, Charles	Crawfordsville

STUDENTS IN PROFESSIONAL COLLEGES REGISTERED FOR STUDIES IN THE COLLEGE OF LIBERAL ARTS

Adams, Albert Wesley	Eldora
Adams, Chester A.	Akron
Barnard, Charles Robert	Clarion
Beardmore, Thomas Alfred	Dorchester
Bemis, George Arthur	Spencer
Boland, James McNamara	Dubuque
Carrell, Dale Everett	Iowa City
Christy, Adelbert	Floris
Coughlon, Michael Charles	Fort Dodge
Cutler, Tyna M.	Nora Springs
Elliott, Edward Gregory	Epworth

* Projected registration.

STUDENTS—THE COLLEGE OF LIBERAL ARTS 519

Evans, John Wesley
Fishburn, Jesse
Forsyth, Lawrence Ray
Gunderson, Carl Oscar
Haney, Homer Eddison
Hennessy, Felix Alphonsus
Henry, Bert William
Hurley, William James
Keith, Jesse Edson
Kelly, James Edwin
Leighton, Isaac Wellman
McGuire, Roy Alvin
Mitchell, Lafayette Douglas
Morgan, Edward Joseph
Mueller, Oscar Otto
Mullan, Alfred William
Newbern, Lester F.
O'Hern, Daniel Lawrence
Oldag, George Charles
Ontjes, Frederick Anton
Otis, Arthur Howard
Pasley, Crockett Hector
Ramseyer, Christian William
Reed, James Paul
Rogers, Thomas Lowry
Rowland, Morris Downs
Savage, Samuel Micajah
Schadt, Fred Conrad
Schnare, Frederick William
Sheehan, Daniel Henry
Shifflet, James Glenn
Sleeter, Ralston William
Trousdale, Robert Edwin
Walker, Henry Grass
Walter, Earl Philip
Wolfe, Cressy C.
Woods, Arthur Daniel

Decatur
Muscatine
Griswold
Kensett
Oregon, Ill.
Strawberry Point
Strawberry Point
Volga
Goldfield
Hudson
Wellman
Merrimac
Lyons
New Market
Van Meter
Waterloo
DeWitt
Barnum
Luana
Aplington
Glenwood
Nevada
Bloomfield
Muscatine
Minburn
Milton
Salem
Amana
Davenport
Watervliet, N. Y.
Malcom
Storm Lake
Grundy Center
Iowa City
Hartley
Bagley
Iowa City

THE GRADUATE COLLEGE

DEGREES CONFERRED JUNE, 1905.

DOCTOR OF PHILOSOPHY

Bartsch, Paul, B. S., 1896 M. S. 1899
Bell, William Bonar, M. Di., 1899 Iowa State Normal;
B. A., 1902; M. S., 1903 .

MASTER OF ARTS

Burnett, George Ritter, 1880, West Point; B. S., 1904;
LL. B., 1904
Ferriss, Emery Nelson, B. Ph., 1904, Western College
Ferson, Merton LeRoy, B. Ph., 1900; LL. B., 1901
Haan, Frederike Barbara, B. A., 1904, University of Wisconsin
Hoffman, Mabel V., B. A., 1904
Johnson, Joseph Oliver, M. D., 1897, Iowa State Normal; B.
Ph., 1904
Kato, Kato Tokio, B. A., 1892, University of Tokyo
Lee, Judson Fiske, B. A., 1904, Des Moines College
Monnett, Julien Charles, B. Ph., 1892; LL. B., 1893
Nelson, Edmund Christian, M. Di., 1897, Iowa State Normal;
B. Ph., 1904
Pratt, Mrs. Margaret Tobin, M. Di., 1900, Iowa State Normal;
B. A., 1903
Robinson, Alta Aileen, B. Ph., 1900
Shuck, May, B. Ph., 1900
Smith, Ethel Lenore, B. A., 1904, Penn College
Swire, Ethelind, B. Ph., 1904
Wiehr, Josef, B. Ph., 1904

MASTER OF SCIENCE

Albert, Fred, B. Ph., 1903
Blythe, Edward Ellsworth, B. Ph., 1900; M. D., 1904

Charlton, Max Rosecrans, B. S., 1903
 Cronin, Sarah Elizabeth, B. S., 1903.
 Hanson, Clarence Henry, B. S., 1903
 Hockett, Seburn, Waldo, B. S., 1904

CIVIL ENGINEER

Lovell, Frederick W., B. S., in Civil Engineering, 1894

MATRICULATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Albert, Fred, Jr.	Reinbeck
B. Ph., 1903; M. S., 1905	
Internal Medicine	
Anderson, Rudolph Martin	Iowa City
B. Ph., 1903	
Zoology, Animal Biology	
Aurner, Clarence Ray	Tipton
M. Di., 1891, Iowa State Normal; B. Ph., 1903	
Education, Political Science	
Bailey, Bert Hield	Cedar Rapids
B. S., 1897; M. S., 1900, Coe College; M. D., 1900 Rush	
Medical	
Zoology	
Bailey, Frederick William	Iowa City
B. S., 1902; M. S., 1904	
Ophthalmology, Physiology and Pathology	
Branson, Laura House	Iowa City
M. D., 1885; B. S., 1901; M. S., 1904	
Pathology, Gynecology	
Brown, Charles Calhoun	Iowa City
B. A., 1898, Coe College	
Education, Ethics	
Buffum, Hugh Straight	Le Roy
B. A., 1901; M. A., 1902	
Education, Psychology, Public Speaking	
Charlton, Max Rosecrans	Clear Lake
B. S., 1903; M. S., 1905	
Internal Medicine	
Collett, Samuel William	Iowa City
B. S., 1886; M. S., 1894, Moore's Hill College	
Botany, Geology	

- Conrad, Titus Anderson Swedona, Ill.
 B. A., 1901, Gustavus Adolphus College; B. D., 1904,
 Augustana College
 Psychology, Philosophy, Greek
- Dorcas, Herbert Clifford Iowa City
 B. Ph., 1889, Iowa; M. A., 1903, Columbia
 Education
- Edinger, Paul Frederick Davenport
 B. A., 1905
 Economic Geology, Chemistry
- Edmondson, Charles Howard Iowa City
 B. Ph., 1903; M. S., 1904
 Zoology, Animal Morphology
- Ensign, Forest Chester Iowa City
 M. Di., 1895, Iowa State Normal; B. Ph., 1897; M. A.,
 1900
 Education, Sociology
- Ferriss, Emory Nelson Toledo
 B. Ph., 1904, Western College; M. A., 1905
 German, English
- Fracker, George Cutler Cedar Rapids
 B. Ph., 1894; M. A., 1900
 Psychology, Philosophy
- Klose, William Henry Fayette
 B. A., 1886; M. A. 1891, Roanoke College;
 B. D., 1889, Yale; M. L., 1899, University of Minnesota
 Germanics, Romance, Education
- Morgan, William John Sibley
 B. S., 1905, Morningside College
 Chemistry, Physical Chemistry
- Paarman, Juergen Herman Davenport
 B. S., 1902; M. S., 1902
 Zoology
- Seaver, Fred Jay Mount Pleasant
 B. S., 1902, Morningside College; M. S., 1904
 Botany, Zoology
- Starch, Daniel La Crosse
 B. A., 1903, Charles City College; M. A., 1904
 Psychology, Philosophy, Education

- Tatum, Arthur Lawrie West Branch
 B. S., 1905, Penn College
 Physical Chemistry, Organic Chemistry
- Tellier, Frank Ellsworth Sutherland
 B. A., 1898, Iowa College; M. A., 1905
 English, Education
- Udden, Jon Andreas Rock Island, Ill.
 B. A., 1905, Augustana College
 Geology, Chemistry
- Wassam, Clarence Wycliffe Iowa City
 M. Di., 1900, Iowa State Normal; B. Ph., 1903; M. A., 1904
 Economics, History
- Youngert, Sven Gustaf Rock Island, Ill.
 B. D., 1899; B. A., 1901, Augustana College
 Philosophy, Psychology

MATRICULATES FOR THE DEGREE OF MASTER OF ARTS

- Baillie, Ethelyn M. Storm Lake
 B. A., 1904, Buena Vista College
 English Literature, English Language
- Bale, Christian Emil Glenwood, Minn.
 B. A., 1904, Luther College
 English Language, English Literature, Old Norse
- Beaulieu, Leo Victor Sabula
 B. A., 1904
 Education, Philosophy
- Bemis, Frances Perl Estherville
 B. Ph., 1902
 Education, German
- Buresh, George Francis Cedar Rapids
 B. Ph., 1904, Coe College
 History, Education
- Burnquist, Bert Blaine Fort Dodge
 B. Ph., 1905
 Constitutional Government, Jurisprudence
- Cromer, Emory Arnett Union
 B. Ph., 1891, Cornell College
 Education, History

Cummings, Margaret Paulina	Sioux City
B. A., 1905, Buena Vista College	
Latin, German	
Ellerbroch, Mabel Evelyn	Sioux City
B. Ph., 1905, Morningside College	
Germanics, Old English	
Elliott, Oliver Morton	Sheldon
B. A., 1890, Marietta College	
Education, Psychology	
Fellows, Ora Mable	Iowa City
B. S., 1899, Upper Iowa University	
English Literature, English Language	
Files, Ray	Iowa City
B. Ph., 1905	
U. S. History, Political Science	
Fitch, Harry Holland	Lytton
B. A., 1902	
Latin, Education, Greek	
Garver, Frank Harmon	Sioux City
B. A., 1898, Upper Iowa University	
American History, Political Science	
Gearhart, George Woodward	Batavia
B. A., 1905, Parsons College	
Economics, Corporation and Finance	
Geyer, Ellen	Cedar Rapids
B. Ph., 1902	
English Literature, English Language	
Heard, Mary Kathrina	North East, Pa.
Ph. C., 1892, University of Michigan; B. Ph., 1905; M. D., 1905	
Ophthalmology, Anatomy	
Hoar, Mary Elizabeth	Iowa City
B. Ph., 1905	
Education, History	
Hoffsten, Conrad Emanuel	Rock Island, Ill.
B. A., 1897; B. D., 1901, Augustana College	
Philosophy, Greek	
Johnson, Henry Charles	Decorah
B. Ph., 1903	
Education, History	

- Jones, Pamela Pearl Cherokee, Kas.
B. A., 1906 (In Course)
English, Economics
- Kirby, James Francis Marengo
B. Ph., 1902
Public Speaking, Political Science
- Koehler, Hugo Wilhelm Waterloo, N. Y.
B. A., 1903, Syracuse University
German, English
- Lewis, Esther Oskaloosa
B. A., 1905, Penn College
English Literature, Rhetoric
- Longstreth, Oscar Dolsen Little Rock, Ark.
M. Di., 1898, Iowa State Normal; B. S., 1904
Economics, Education
- Lowman, Stella Elizabeth Iowa City
B. Ph., 1902
Latin, English
- McClenahan, Perry Eugene Iowa City
M. Di., 1899, Iowa State Normal; B. Ph., 1905
Education, Economics
- McCullough, Clara Elizabeth Osage
M. Di., 1903, Iowa State Normal; B. Ph., 1905
Economics, Finance
- McDonald, David James Ohio, Ill.
B. A., 1905, Western College
Education, Psychology
- McLane, Arthur C. Deepriver, N. Dak.
B. Ph., 1904
Anthropology, Geology
- Mark, Edward William Bartholomew Le Claire
M. Di., 1900, Iowa State Normal; B. S., 1905
Education, Psychology
- Marmon, James Asa Mitchellville
B. A., 1903, Simpson College
English Literature, English Language
- Marsh, Ruth Maria Charles City
B. A., 1906 (In Course)
Economics, Sociology

- Meade, Leonard Fletcher Iowa City
B. S., 1903, Iowa College
U. S. History, Education
- Parish, John Carl Cedar Falls
M. Dl., 1902, Iowa State Normal; B. Ph., 1905
Political Science, Economics
- Paulson, Caroline H. Britt
B. Ph., 1906 (In Course)
Latin, German
- Perkins, Daniel R. Carson
B. Ph., 1901
Economics and Sociology, Political Science
- Peterson, Henry John Story City
B. A., 1905, St. Olaf College
Political Science, American History
- Quigley, Edward Gross Moorehead, Minn.
B. Di ., 1900, Iowa State Normal; B. Ph., 1905
Education, Psychology
- Randall, Frank Hall Denison
B. A., 1902
U. S. History, Education
- Rathbun, Don Seavey Kingsley
B. S., 1904, Cornell College
Commerce, Economics
- Reed, Ivy Leslie Odebolt
M. Dl., 1900, Iowa State Normal; B. Ph., 1903
Education, Psychology
- Rigby, Alice Mount Vernon
B. Ph., 1902, Cornell College
English Literature, English Language
- Schneider, Daniel Detrich Hinton
M. Dl., 1902, Iowa State Normal; B. Ph., 1904
Political Economy, Statistics
- Stewart, Rolland Maclaren Lamoni
B. A., 1904
Education, Psychology
- Sunler, Bertha Iowa City
B. A., 1905
French, German

Voss, Hertha Louise	Davenport
B. Ph., 1904	
French Literature, French Language	
Williams, Mary Florence	Iowa City
B. A., 1905	
Latin, English	
Young, David Lawrence	Sioux City
B. Ph., 1905, Morningside College	
Political Science, History	
Young, Mrs. Emma Fair	Iowa City
B. Ph., 1905, Morningside College	
Public Speaking, English	

MATRICULATES FOR THE DEGREE OF MASTER OF SCIENCE

Cameron, John Edwin	Cedar Rapids
M. Di., 1894, Iowa State Normal; B. S., 1892; M. S., 1895, Lenox College; B. S., 1895	
Zoology, Botany	
Carter, Edward Albert	Muchakinock
B. Ph., 1903	
Bacteriology, Pathology	
Crary, Archie West	Boone
B. S., 1897, Cornell College; LL. B., 1904	
Ophthalmology, Anatomy	
Ensley, Bruce	Iowa City
B. S., 1903, Penn College	
Pathology, Histological Botany	
Fox, Walter Henry	West Union
M. D., 1905	
Ophthalmology, Regional Anatomy	
Gow, James Ellis	Greenfield
B. Ph., 1901	
Embryology of the Aroids, Histological Botany	
Ivins, Harry Morgan	Grundy Center
B. S., 1904	
Morphology, Physiology (Medicine)	
Meade, James Albert	Iowa City
B. S., 1900, Iowa College	
Physics, Mathematics	

Pence, Lawrence Waldo	Laurel
B. Di., 1894, Valparaiso College; M. D., 1898	
Ophthalmology, Physiology	
Prentiss, Henrietta	Bloomsburg, Pa.
B. A., 1902, Smith College	
Zoology, Botany, German	
Quaife, Lawrence Albert	Nashua
B. Ph., 1903, Iowa College	
Surgical Pathology, Pathological Preparations	
Royal, Malcolm Allen	Des Moines
B. S., 1904	
Pathology, Experimental Materia Medica	
Smith, Homer A.	Mount Vernon
B. S., 1902, Cornell College	
Ophthalmology, Physiology	
Stelling, Charles Henry Andrew	Iowa City
M. D., 1905	
Ophthalmology, Histology	
Taylor, Maude Estella	Iowa City
B. S., 1904	
Ophthalmology, Biology	
Todd, David Duke	Ida Grove
B. S., 1905, Coe College	
Physiological Chemistry, Physical Chemistry	
Walsh, John Graney	Perry
B. S., 1903	
Internal Medicine, Pathology	
Wood, Charles David	New Providence
B. S., 1905, Penn College	
Physics, Mathematics	

MATRICULATES NOT CANDIDATES FOR DEGREES.

Brown, Earl	Emmetsburg
B. Ph., 1905	
Chawner, Mary Grove	Indianapolis, Ind.
B. A., 1896, Penn College; M. A., 1904	
Collins, Edward Robert	Iowa City
B. S., 1902; M. A., 1903	
Dey, Ann Hull	Iowa City
B. Ph., 1899	

STUDENTS—THE GRADUATE COLLEGE 529

Freeman, Mae Agnes	Iowa City
B. Ph., 1897; M. A., 1898	
Griffith, Dwight Moody	Iowa City
B. A., 1905	
Howell, Gertrude	Iowa City
B. Ph., 1895	
Kastman, Valborg	Cambridge, Mass.
B. A., 1904	
Leach, Claude Percy	Iowa City
B. A., 1897, Drake University; B. D., 1901, Yale	
Loos, Mrs. Mary Alice Dickson	Iowa City
B. A., 1883, Otterbein University, Ohio	
Manatrey, Jessie Fye	Fairfield
B. A., 1905, Parsons College	
Metzger, Belle Agnes	Iowa City
B. A., 1905	
Metzger, Della Elizabeth	Iowa City
B. A., 1905	
Mordoff, Carrie Ella	Iowa City
B. Ph., 1884; M. A., 1887	
Nelson, Bendiks John	Ellsworth
B. Ph., 1906 (In Course)	
Nelson, Edmund Christian	Iowa City
M. Dl., 1897, Iowa State Normal; B. Ph., 1904; M. A., 1905	
Pratt, Mrs. Margaret Allie Tobin	Fort Dodge
B. Dl., 1900 Iowa State Normal; B. A., 1903; M. A., 1905	
Rankin, Luella Clarinda	Iowa City
B. Ph., 1887	
Seashore, Mrs. Roberta Holmes	Iowa City
B. Ph., 1891; M. A., 1893	
Seymour, Edith Maria	Iowa City
B. S., 1899; Ph. G., 1905	
Swisher, Esther McDowall	Iowa City
B. A., 1901	
Van Epps, Clarence	Iowa City
B. S., 1894, Iowa State College; M. D., 1897, Iowa;	
M. D., 1898, University of Pennsylvania	
Van Tausk, Victor	Hills
B. S., 1899, University of New Zealand; M. A., 1901,	
Osborn Paris	

SUMMER SESSION

THE GRADUATE COLLEGE

DEGREES CONFERRED JULY 28, 1905

MASTER OF ARTS

Tellier, Frank Ellsworth

MASTER OF SCIENCE

Watson, Emery Earnest

MATRICULATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Buffum, Hugh Straight	Le Roy
B. A., 1901; M. A., 1902	
Education, Psychology	
Klose, William Henry	Fayette
B. A., 1886; M. A., 1891, Roanoke College;	
B. D., 1889, Yale; M. L., 1899, University of Minnesota	
Germanics, Romance, Education	
Monnett, Julien Charles	Iowa City
B. Ph., 1892; LL. B., 1893; M. A., 1905	
Political Science	

MATRICULATES FOR THE DEGREE OF MASTER OF ARTS

Boot, Estella May	Cherokee
B. A., 1901, University of South Dakota	
Latin, Greek	
Bracewell, Hollie Broughton	Corydon
B. Ph., 1889, University of Michigan	
History, Economics	
Buresh, George Francis	Cedar Rapids
B. Ph., 1904, Coe College	
History, Education	

Countryman, George C. B. A., 1900, Indiana Normal College; B. Ph., 1904, Western Union College English, Education	Le Mars
Cromer, Emory Arnett B. Ph., 1891, Cornell College Education, History	Union
Elliott, Oliver Morton B. A., 1890, Marietta College Education, Psychology	Sheldon
Files, Ray B. Ph., 1905 History, Political Science	Iowa City
Ford, Percy Lindsay B. A., 1897, Palmer College Greek, Latin	Legrand
Foster, Mabel Marcella B. Ph., 1899 Education	Iowa City
Harrison, Albert E. B. A., 1904, Parsons College Botany, Geology	Hiteman
Hoar, Mary Elizabeth B. Ph., 1905 Education, History	Iowa City
Hutchinson, Everett Ross B. Ph., 1905 History, Economics	Allerton
Jenner, Edwin Alexander B. S., 1903, Simpson College Psychology, Education	Indianola
Johnson, Henry Charles B. Ph., 1903 Education, History	Greene
Longstreth, Oscar Dolsen B. S., 1904 Education, Sociology	Muscatine
McClenahan, Perry Eugene M. Dl., 1899, Iowa State Normal; B. S., 1905 Education, Economics	Iowa City

- Mark, Edward William Bartholomew** **LeClaire**
M. Dl., 1900, Iowa State Normal; B. S., 1905
Education, Psychology, Botany
- Maudlin, Mina Ray** **Ladora**
B. A., 1902
Latin, Greek
- Meade, Leonard Fletcher** **Iowa City**
B. S., 1903, Iowa College
U. S. History, Education
- Moffitt, Chester Earl** **Fonda**
B. Ph., 1904
History, Education
- Murphy, Genevieve Beatrice** **Iowa City**
B. A., 1903
Latin, Education
- Perkins, Daniel R.** **Carson**
B. Ph., 1901
Sociology, Political Science
- Pratt, Harlow Munson** **Kalo**
B. S., 1903; LL. B., 1905
Economics, English
- Pye, William Arthur** **Wilton Junction**
B. Ph., 1900 Cornell College
History, Education
- Quigley, Edward Gross** **Iowa City**
B. Dl., 1900, Iowa State Normal; B. Ph., 1905
Education, Psychology
- Randall, Frank Hall** **Denison**
B. A., 1902
History, Education
- Reed, Leslie Ivy** **Odebolt**
M. Dl., 1900, Iowa State Normal; B. Ph., 1903
Education, Psychology
- Rich, David W.** **Wayland**
B. A., 1902; LL. B., 1905
Greek, Public Speaking
- Spedel, Mae Elizabeth Agnes** **Iowa City**
B. A., 1904
German

Stewart, Rolland Maclaren	Toledo
B. A., 1904	
Education, Psychology	
Sunier, Bertha	Iowa City
B. A., 1905	
French, German	
Tellier, Frank Ellsworth	Sutherland
B. A., 1898, Iowa College	
English, Education	
White, Michael Horatio	Essex
B. S., 1902, Simpson College	
History, Economics	

MATRICULATES FOR THE DEGREE OF MASTER OF SCIENCE

Gow, James Ellis	Greenfield
B. Ph., 1901	
Embryology of the Aroids, Histological Botany	
Meade, James Albert	Iowa City
B. S., 1900, Iowa College	
Physics, Mathematics	
Mueller, Eugene Frederick	Denison
B. A., 1902	
Mathematics, Physics	
Watson, Emery Earnest	Stockport
M. Di., 1901, Iowa State Normal; B. S., 1905	
Mathematics, Physics	
Wille, Otto Victor	Iowa City
B. S., 1905	
Morphology, Botany	
Young, William Albert	Pella
B. A., 1898, Central University; B. A., 1904, Chicago University	

MATRICULATES NOT CANDIDATES FOR DEGREES

Albert, Fred, Jr.	Reinbeck
B. Ph., 1903; M. S., 1905	
Blaine, Lela Rebecca	Council Bluffs
B. Ph., 1904	

Bream, Emory David	Gettysburg, Pa.
B. A., 1902, Pennsylvania College	
Bush, Stephen Hayes	Iowa City
B. A., 1901; M. A., 1902, Harvard	
Carroll, Elizabeth Fawcett	Cedar Rapids
B. Ph., 1901	
Carroll, Nancy Grace	Cedar Rapids
B. Ph., 1898	
Clayton, Joseph Ellsworth	Hamburg
B. Ph., 1898	
Collins, Edward Robert	Iowa City
B. S., 1902; M. A., 1903	
Cooper, Mrs. Margaret Williams	Iowa City
B. Ph., 1893	
Griffith, John George	Iowa City
B. S., 1901	
Groendycke, Clara Louisa	Gracehill
B. S., 1900; M. S., 1904	
Haas, Harry	LeGrand
B. S., 1890, Union Christian College	
Loos, Mrs. Mary Alice Dickson	Iowa City
B. A., 1883, Otterbein University, Ohio	
Lytle, Mary	Iowa City
B. Ph., 1898	
McFarland, Winifred	Iowa City
B. Ph., 1899	
Metzger, Della Elizabeth	Iowa City
B. A., 1905	
Mingus, Edna	Iowa City
B. A., 1902	
Moravec, Agnes Emma	Belle Plaine
B. Ph., 1903	
Mordoff, Carrie Ella	Iowa City
B. Ph., 1884; M. A., 1887	
Otto, Lucia Caroline	Iowa City
B. Ph., 1902	
Patton, Fannie D.	Iowa City
B. Ph., 1892	
Prentiss, Henrietta	Bloomsburg, Pa.
B. A., 1902, Smith College	

Quigley, Sarah Ruth B. Ph., 1902; M. A., 1903	Iowa City
Rankin, Evangeline B. Ph., 1888	Iowa City
Seidlitz, Mrs. Florence Hess B. Ph., 1882	St. Louis, Mo.
Smith, Maude Louise B. Ph., 1904	West Liberty
Speldel, Ida Theresia B. S., 1903; M. S., 1904	Iowa City
Sporleder, Mary Louise B. Ph., 1904	Iowa City
Sunier, Fanny Annette B. Ph., 1902; M. A., 1903	Iowa City
Terrell, Mrs. Ada Knight B. Ph., 1881, Iowa; B. L., 1890, University of Michigan	Winthrop
Waterbury, Ella Betts B. A., 1905	Iowa City
Wells, Frank B. Ph., 1895; LL. B., 1901	Miles
Wilson, Evelyn, Ellen B. Ph., 1900, Iowa College	Grinnell

THE COLLEGE OF LIBERAL ARTS

FOURTH YEAR

Albright, George Carter	Danville
Boss, Clara Atwood	Cedar Falls
M. Dl., 1895, Iowa State Normal	
Downey, Ezekiel Henry	Memphis, Mo.
B. S., 1898, Southern Iowa Normal	
Johnson, Thomas E.	Bode
Jones, Pamela Pearl	Cherokee, Kas.
Kalkofen, Emma E.	Fontanelle
Knauer, Eda Dorothea	Des Moines
Pelzer, Louis	Atlantic
M. Dl., 1901, Iowa State Normal	
Price, Mildred	Iowa City
Quigley, Samuel	Iowa City
B. Dl., 1895, Iowa State Normal	
Thornburgh, William Burton	Seymour
B. S. Dl., 1898, Missouri State Normal	
Woods, Mary Louise	Iowa City

THIRD YEAR

Breese, Garfield Eugene	Iowa City
Brinton, Edward Arthur	Iowa City
M. Dl., 1902, Iowa State Normal	
Burton, Clifford Edgar	Yorktown
B. Dl., 1901, Iowa State Normal	
Davis, Charlotte Mae	Strawberry Point
M. Dl., 1897, Iowa State Normal	
Davis, Deborah	Otranto
M. Dl., 1897, Iowa State Normal	
Doll, Clara	Iowa City
Douglass, Francis Luther	Des Moines
Duncan, Cleveland Reuben	Iowa City
Farnum, Mrs. Eva Crane	Mason City

Ferguson, Rose Mary

B. Dl., 1898, Iowa State Normal

Haldeman, Virginia Morning

Healy, William

Illick, John Theron

Loizeaux, Cecelia Adelaide

Luse, Eva May

M. Dl., 1904, Iowa State Normal

Middleton, William Drummond

Shrimplin, Jessie C.

Thompson, Effie Louise

Tyler, Grace Clarissa

Whedon, Arthur De Wett

Williams, Harriet Helen

B. Dl., 1901, Iowa State Normal

SECOND YEAR

Bailey, Sadie Lydia

Barrow, Mary Modestas

Blakely, William Henry

Bradley, Benjamin Graham

Corlett, Robert Kinley

Corso, Ignatia

Hoar, Friend Reed

Latchem, Louise May

Schichtl, Caroline Magdalene

Vermillion, Clara Marinza

Yavorsky, Irene Caroline

Cherokee

Iowa City

Lisbon

Burlington

Des Moines

Koss

Davenport

Mt. Ayr

Iowa City

Columbus Junction

Iowa City

New Sharon

Iowa City

Iowa City

Livermore

Iowa City

Iowa City

Iowa City

Iowa City

Washington

Algona

Iowa City

Iowa City

FIRST YEAR

Andersen, Anne Marie Kathryn

Hands, Elsie

Merritt, Frank D.

Schuette, Minnie Antoinette

Thompson, Margaret Adelaide

Lyons

Iowa City

Iowa City

Ackley

Iowa City

UNCLASSIFIED

Adams, Sadie Maude

Ankrum, Fred Leslie

Ph. G., 1908, Highland Park

Bain, Elizabeth Jane

B. Dl., 1898, Iowa State Normal

Owasa

Hosper

College

Webster City

Barry, Josephine Mary	Iowa City
Bates, Mildred Olive	Wyoming
B. Dl., 1902, Iowa State Normal	
Beebe, Norma Alliene	Menlo
Benson, Oscar H.	Goldfield
Black, Mabel	Shellsburg
B. Dl., 1901, Iowa State Normal	
Blake, Alice Edith	Cherokee
B. Dl., 1899, Iowa State Normal	
Blake, Loretta Helene	Des Moines
B. Dl., 1899, Iowa State Normal	
Blonde, Mary Clara	Traer
Brinton, Mrs. Rilla Bates	Iowa City
Burbank, Dean S.	Oxford
Burge, Jennie	Iowa City
Caillet, Henry Louis	Macedonia
Callison, Bert Henry	Lorimer
M. Dl., 1904, Iowa State Normal	
Clark, Alice	Iowa Falls
Connor, J. June	Sioux City
Cook, Arthur Talbott	Oxford
Cowgill, Erma Mary	West Branch
Crouch, Winnie Jane	Artesian, S. Dak.
Curtis, Lewis Demain, Jr.	Center Point
M. Dl., 1901, Iowa State Normal	
Dalton, Rose	Letts
Davis, Margaret Belle	Paris
Chase, Ella M.	Iowa City
Christiansen, James	Waterloo
M. Dl., 1901, Iowa State Normal; M. D., B. S., 1905	
Dostal, Methodius Constantine	Lawler
Dunham, Mabel Gertrude	Clinton
Dunham, Marcia Orintha	Troy, N. Y.
Dutton, James Howland	Albion
Eells, Harry Leroy	New Hartford
Enright, Ada Eva	Menlo
Evans, John Wesley	Decatur, Ill.
Falk, Elsie Antonie	Davenport
Falk, Louise Henrietta	Davenport
Feeney, Helena	Northwood
Fisher, Nellie Delilah	Troy Mills
Foley, Ella Frances	Iowa City

Fuller, Albert Clark, Jr.	Storm Lake
M. D., 1899, Iowa State Normal	
Gardiner, Alfred R.	Jewell
Gehlen, Viola Catherine	Le Mars
Gibson, Ezra Nelson	Centerville
B. D., 1898, Iowa State Normal	
Girtler, Blanche Vienna	Iowa City
Graham, Albert W.	Wyoming
B. D., 1902, Iowa State Normal	
Griffith, Zaidee Ava	Ames
B. S., 1905, Iowa State College	
Haberstroh, Mary Catherine	Iowa City
Hart, Nella	Iowa City
Hervert, Amelia	Iowa City
Hill, Ina Louise	Fort Dodge
Hook, Ellis Jenkins	Decorah
Jacobs, Ida	Des Moines
Johnson, Newell Ellsworth	New London
Jones, Lawrence Clifton	Marshalltown
Judd, Alva Edward	Ottumwa
Koebel, George Pendleton	West Bend
B. S., 1898, Northern Illinois State Normal	
Krofta, Josephine Irene	Iowa City
Lewis, Grace	Rock Island, Ill.
B. S., 1902, Augustana College	
Long, Mary Regina	Indianola
Lord, Frederick Pomeroy	Iowa City
Luther, Nellie Angenette	Adel
B. D., 1894, Drake University Normal	
Lynch, Laura Candace	Des Moines
McCormick, Margaret Colette	Churdan
McCune, Lily	Kirkville
B. S., 1898; M. S., 1901, Penn College	
McKinley, Ethel Eveleth	St. Ansgar
B. S., 1905, Iowa State College	
McKinley, Frederick William	Clermont
Mahannah, Frank Laban	Traer
Marsh, Ida Belle	Adel
Marshall, Florence Rose	Cresco
B. D., 1898, Iowa State Normal	
Mather, Edith Louise	West Branch
Mather, Lydia Jeannette	Springdale
Mathiesen, Kjirstine Aneta	Harlan

Merrill, Vida Helen	Mediapolis
Michener, Mrs. Mary Pickrell	New Providence
B. Di., 1890, Iowa State Normal	
Miller, Julia	Davenport
Mortland, Ruth	Montezuma
Nebe, Edith Male	Glenwood
Nolte, Lydia Evelyn	Guttenberg
Otis, Caroline N.	Boone
M. Di., 1897, Iowa State Normal	
Parish, Ruby Eunice	Grinnell
Parsons, Etta Ruth	Tipton
Pugsley, Frank Garfield	Toledo
Rae, John J.	Pocahontas
Ray, Mrs. Mabel Shaw	Lansing
M. Di., 1901, Iowa State Normal	
Ray, William H.	Lansing
M. Di., 1901, Iowa State Normal	
Rhoads, Luke Caldwell	Clarksville
M. Di., 1902, Iowa State Normal	
Richards, Carl Ernest	Red Oak
Roberts, Martha Frances	Cherokee
M. Di., 1899, Iowa State Normal	
Rourke, Mary	Farley
Ryan, Arthur Clayton	Muscatine
Sayers, Milton Cary	Jefferson
Sayre, May Helen	Scranton
Schall, Elias Freeman	West Liberty
Schoelerman, Rose Matilda	Lester
B. Di., 1901, Iowa State Normal	
Senning, John Peter	Le Mars
B. Ped., 1903, Western Union College	
Seydel, Blanche	Iowa City
Slade, Albert Arthur	Tiffin
Smith, Franklin Orion	Cedar Falls
M. Di., 1903, Iowa State Normal	
Smyth, Clara	Solon
Sorenson, Anna Marie	Hampton
Sparks, Bertha E.	Iowa City
Sylvester, Reuel Hull	Malcom
M. Di., 1904, Iowa State Normal	
Tellier, Mrs. Margaret Bryce	Sutherland
Thorson, Jennie	Forest City
Thorson, Thorwald	Forest City

Trafford, Millie	West Branch
Waterbury, Mabel	Dayton
Whedon, Alma Theodora	Iowa City
Woodruff, John Perry	Denison
M. Dl., 1900, Iowa State Normal	
Wright, May Lydia	Cedar Falls
M. Dl., 1902, Iowa State Normal	
Yeager, Charles	Crawfordsville
Yenter, Lydia	Oxford
Youel, Blaine Tarpenning	Doon
B. Dl., 1898, Iowa State Normal	

THE LIBRARY TRAINING SCHOOL

Abel, Clara Locke	Decatur
Adams, Mary Nyce	Atlantic
Bankson, Georgetta	Waterloo
Clapp, Alice Beaman	Burlington
Duble, Mrs. Annie L.	Spencer
Fuller, Mrs. Luella L.	Marseilles, Ill.
Hamilton, Pearl	Marengo
Jay, Mary Berdena	Shenandoah
B. S. Dl., 1892, Drake University	
Jones, Mrs. Jennie	Manchester
Lilly, Elizabeth	Burlington
Meyers, Grace Emily	Denison
Morton, Frances	Falls City, Neb.
B. A. 1896, Nebraska University	
Murphy, Genevieve Hyacintha	Clinton
Noll, Amy Wentworth	Grinnell
Smith, Mrs. Calista Sanders	Iowa City
Tirrill, Mrs. Eliza Jane Weeks	Manchester
Whitney, Mrs. Elizabeth H.	Fairfield
B. Dl., 1897, Iowa State Normal; B. A., 1903, Parsons College	
Yates, Mrs. Anna Shaw	Tipton

THE COLLEGE OF APPLIED SCIENCE

FOURTH YEAR

Berry, John William	C. E.	Iowa City
Blakely, Ernest Reuben	C. E.	Corydon
Bos, Garret	E. E.	Pella
Bruins, William John	C. E.	Sioux Center
Champion, Roy B.	E. E.	Iowa City
Eckhardt, Henry Jacob	C. E.	Davenport
Hemmer, Emil John	C. E.	Iowa City
Hershire, Richard Aaron	C. E.	Iowa City
Isenberg, Irving Ray	C. E.	Green Mountain
Koeler, Frank Ernest	M. E.	Marshalltown
MacDonald, John Robert	E. E.	Anaconda, Mont.
Naberhuis, Henry Albert	C. E.	Sioux Center
Randall, Clifford Alonzo	C. E.	Denison
Ruff, Edward John	C. E.	Wilton Junction
Seidel, Earl Reinholdt	M. E.	Portland
Tupper, Eliakim William	C. E.	Osage
Wright, Bert J.	C. E.	Plato

THIRD YEAR

Bowman, Clarence Henry	C. E.	Solon
Dean, Basil	C. E.	Spencer
Drake, Guy Arthur	C. E.	Adel
B. Ph., 1905		
Edwards, Evie James	E. E.	Williamsburg
Emmons, Olin Joseph	E. E.	Iowa City
Hatch, Edward J.	C. E.	Hamburg
Kimble, Howard	C. E.	Clear Lake
Kramer Raymond Carl	C. E.	Elkader
Le Van, Alvin	C. E.	Guthrie Center
Lee, Albert Walter	C. E.	Iowa City
McCann, Charles Raymond	C. E.	Springdale

STUDENTS—THE COLLEGE OF APPLIED SCIENCE 543

Meyers, John Frederick	E. E.	Ida Grove
Negus, Joseph Elisha	C. E.	Iowa City
Olson, William Harold	Mech. E.	Rock Rapids
Peterman, Thomas Blaisdell	M. E.	Iowa City
Pritchard, Kirkwood Alexander	C. E.	Iowa City
Quigley, Louis Leroy	E. E.	Iowa City
Rhynsburger, Dick Cornelius	C. E.	Orange City
Sieg, Walter Russell	C. E.	Marshalltown
Stone, Merle Rufus	Forestry	Hawarden
Stoops, Wade Carlisle	C. E.	West Liberty

SECOND YEAR

Baker, Norman Merrill	C. E.	Davenport
Banta, Albert James	C. E.	Lamoni
Baum, Henry John	C. E.	Stone City
Bosworth, William Raymond	E. E.	Webster City
Burgum, Joseph Case	E. E.	Oelwein
Carl, Henry Howard	E. E.	Newton
Canfield, Lloyd Angle	C. E.	Dexter
Carlson, Alexander Ulysses	E. E.	Humboldt
Clarke, Timothy John	C. E.	Clinton
Couch, Charles Everett	Chemistry	Marengo
Goetz, Antony Lewis	E. E.	Iowa City
Hazard, Archie Merrill	M. E.	Iowa City
Hennessy, Edward Francis	C. E.	Iowa City
Hess, Percy Shelley	C. E.	Iowa City
Hoar, Friend Reed	C. E.	Iowa City
Hoth, Louis	Mech. E.	Mexico City, Mex
Lawrence, Arthur Elmer	M. E.	Fort Madison
Lorenzen, Ernest B.	C. E.	Clinton
McMurray, Ray	Mech. E.	Newton
Mercer, Willis Wesley	C. E.	Iowa City
Morgan, Charles Henry	E. E.	Iowa City
Ogg, Harry Lamb	E. E.	Newton
Phelps, Louis Varney	C. E.	Springdale
Poyneer, Fred Julian	E. E.	Williamsburg
Puckett, Ralph Clarence	Mech. E.	Rock Rapids
Repass, Harry Delano	Mech. E.	Dexter
Sample, Mathias William	C. E.	Iowa City
Scherner, John	E. E.	Remsen

Schindhelm, William John	E. E.	Iowa City
Schrock, Elmer Cleland	Mech. E.	Iowa City
Secrest, Charles Mahlon	E. E.	Downey
Thomas, Franklin	C. E.	Red Oak
White, Roy Allen	C. E.	Iowa City

FIRST YEAR

Adams, Joseph Quincey	C. E.	Centerville
Aguilar, Alfonso	E. E.	Zacatecas, Mex.
Aguilar, Ernest Julius	Mech. E.	Mexico City, Mex
Alcazar, Candido Mauricio	Mech. E.	Iloilo, P. I.
Baluyut, Sotero	C. E.	SanFrenando,P.I.
Barnes, Ray Vernon	E. E.	Mount Vernon
Brainerd, Charles Lucian	C. E.	Iowa City
Brooks, Harold C.	E. E.	Aurelia
Carpenter, Donald Sanford	C. E.	Des Moines
Clausen, Sam J.	M. E.	Clear Lake
Claubaugh, Joseph Bruse	M. E.	Dexter
Connor, Edward Garfield	M. E.	Humboldt
Davis, William Benjamin	C. E.	Cresco
Dean, Henry Herman	C. E.	Glenwood
Dennis, Carlon Leroy	C. E.	Clinton
Dolmage, John Peter	Mech. E.	Iowa City
Dress, Louis Miller	E. E.	Iowa City
Eriksson, Erik Joseph	C. E.	Odebolt
Felkner, William Willard	Mech. E.	Iowa City
Ferguson, David Herman	C. E.	New Hampton
Forrey, George Leroy	M. E.	Marshalltown
Francisco, Luis	C. E.	Batangas, P. I.
Graham, Jennie	C. E.	Iowa City
Griffin, Herbert Karl	E. E.	Iowa Falls
Griffith, Glenn Reese	C. E.	Iowa City
Halbfass, Gerhardt Frederic P.	C. E.	La Porte City
Haynes, Eugene Cosett	M. E.	Centerville
Heinz, William Frederick	M. E.	Ackley
Holcomb, Earl Edward	M. E.	Maquoketa
Johnson, Eric Albert	M. E.	McKeesport, Pa.
Krick, John Anton	Mech. E.	Audubon
Kutcher, Clarence A.	E. E.	Iowa City
Lampe, Elmer Lewis	E. E.	Bellevue

STUDENTS—THE COLLEGE OF APPLIED SCIENCE 545

Lynn, John Elliott	C. E.	Lockridge
Mace, Kleth Virgil	Mech. E.	Moulton
Merritt, Frank D.	C. E.	Iowa City
Miller, LeRoy F	Chemistry	Oxford
Miller, Ray W.	E. E.	Springdale
Mocha, George Edward	E. E.	Iowa City
Moon, Chauncey Alson	E. E.	Iowa City
Morrison Francis Guy	C. E.	Iowa City
Myers, Ralph C.	E. E.	Iowa City
Nelson, Oscar Theodore	C. E.	Clinton
Parrott, Herbert Leslie	E. E.	Iowa City
Phelps, Herbert Parker	C. E.	Springdale
Picken, Robert Lyons	M. E.	Fairfield
Plum, Vern	E. E.	Shelby
Post, Paul	E. E.	Moulton
Puckett, Roswell Clair	Forestry	Rock Rapids
Pursell, Rober Sherman	Chemistry	Easton Pa.
Rein, Verne Vincent	E. E.	Anamosa
Richardson, Carl B.	M. E.	Denison
Rico, Graciano	Mech. E.	Jaro, P. I.
Riley, Harry Dean	E. E.	Marseilles, Ill.
Samuels, Claude A.	E. E.	Marseilles, Ill.
Scheark, Harry Elmer	E. E.	Newton
Shaw, Guy Ray	C. E.	Vinton
Simons, Charles E.	E. E.	Ida Grove
Slaughter, John William	C. E.	Bouton
Smith, Frank Russell	C. E.	Council Bluffs
Smith, Harold John	Mech. E.	West Liberty
Swire, Roger	E. E.	Iowa City
Swisher, Charles Lovell, Jr.	C. E.	Iowa City
Ungson, Rafael G.	C. E.	Lingayen, P. I.
Vallarta, Julian	C. E.	San Isidro, P. I.
Wagner, Ernest John Henry	E. E.	Vinton
Watson, Edward Engle	M. E.	Rock Rapids
Wegner, George Frederick	Mech. E.	Adair
WhitHe, Clarence Lester	C. E.	Centerville
Williamson, Robert Crosier	C. E.	Dixon Ill.
Wilson, Harry Archibald	C. E.	Oelwein
Wright, Jonathan Eugene	C. E.	Plato
Ziegler, Victor	M. E.	Marion

UNCLASSIFIED

Chalmers, Andrew Milton	M. E.	Des Moines
Desmond, Grover Edward	C. E.	Clinton
Hartley, Eugene C.	C. E.	Ida Grove
Hovey, Shirley Seymour	E. E.	Clear Lake
Kerr, Harvey	C. E.	Victor
Krenz, Fred	C. E.	Buffalo Center
Rodriquez, David	Mech. E.	Mexico City, Mex.
Samson, Fernando George	C. E.	Mexico City, Mex.
Saylor, James Brown	C. E.	Milton
Schulte, Peter	E. E.	Walford
Starr, George Byron	C. E.	Manson
Struble, Leo John	C. E.	Pa Porte City
Vollmer, Henry Gottlieb	C. E.	Burlington
Wallin, Rudolph Bernard	Forestry	Stanton
Wilson, Charles	C. E.	Winnipeg, Can.

STUDENTS IN THE COLLEGE OF LIBERAL ARTS
REGISTERED FOR STUDIES IN THE COLLEGE
OF APPLIED SCIENCE

Burkheimer, Ira Arthur	Creston
French, Hiram Earl	Humboldt
Houghton, Paul	Hedrick

THE COLLEGE OF LAW

DEGREES CONFERRED JUNE, 1905

Alford, Lore	McNett, Walter
Algyer, Harold Mills	Maennel, Claude Frederick
Baughn, Wilmot Lawson	Malmberg, Edward Philip
Benshoof, Chester William	Miller, Albert Elias
Bryant, Jesse Chilton	Moffett, Horace Barclay
Burgeson, Henry Adolph	Mosher, Orris, Jr.
Burmeister, August Otto	Neander, Victor Theophilus
B. Ph., 1903	B. Ph., 1904
Cox, Guy	Noel, Charles Elbert
Davis, Charles George	O'Brien, Richard Joseph
Dickson, Charles Frank	Oelkers, Leroy Carl
Dougherty, Ira Elmer	Osborn, Wayne McVeigh
Douglass, Floyd Marion	Pratt, Harlow Munson
Dunn, Delbert	B. S., 1903
Dykstra, Sylvester Henry	Rich, David W.
B. A., 1902	B. A., 1902
Freeman, Earnest Franklin	Roche, Thomas Francis
Garretson, Gail Garfield	B. A., 1892, Cornell College
Gorman, George Curran	Ryan, John Joseph
Greene, Galen Edwin	Scallon, Hubert William
B. A., 1903	M. Di., 1901, Iowa State Nor-
Hayden, Ulysses Grant	mal; B. Ph., 1903
M. Di., 1901, Iowa State	Schoeman, George Adolph
Normal	LL. B., 1904, Drake Univer-
Irvine, Albert Elmer	sity
Jeffers, Clyde Garfield	Smith, Curtis Wales
Johnson, Lewis Gerhard	Spangler, Harrison Earl
B. A., 1902, Luther College	B. Ph., 1903
Jones, Nyle William	Stanfield, Sidney Evert
Keck, Walter L.	Stevenson, Oliver Warren
B. Ph., 1903	B. Ph., 1901, Upper Iowa Uni-
Kelly, Daniel Matthew	versity
Lamprecht, John	Swindle, Anthony J.
Lynch, John Daniel	Vaughn, John Thomas
McLaughlin, Joseph Edmund	Walrod, Claude Delestine
	B. A., 1895
	Wyckoff, Fletcher Felix

THIRD YEAR

Alford, Robert Cushman	Waterloo
Atkinson, William Ira	Clarksville
Barker, Erwin Jeremiah	Cresco
Barnes, Charles Raymond	Tabor
B. A., 1903, Tabor College	
Burkheimer, Clarence Dean	Creston
Burkheimer, John Emmett	Creston
Caldwell, Johnston Eakins	Mt. Hamill
Campbell, Ed Hoyt	Battle Creek
Carlton, Robert Stedman	Spirit Lake
Catlin, Frank Milo	Creston
Chalmers, John George	Iowa City
B. A., 1901, Lafayette College, Pa.	
Christy, Adelbert	Floris
Churchill, Howard Rollin	Cedar Rapids
B. Ph., 1901, Cornell College	
Cross, Cash R.	Iowa City
B. S. 1904	
Cutler, William Alden	Centerville
B. Ph., 1903, Des Moines College	
Davis, Charles Henry	Greeley
De Cou, Samuel Roland	Woodbine
Dennis, Louis Denton	Cedar Rapids
Drewry, Ray Forest	Sac City
B. Ph., 1903	
Edwards, Arthur Clement	Epworth
B. A., 1898, Upper Iowa University	
Floren, Sigfrid Emanuel	Gowrie
Forsyth, Lawrence Ray	Griswold
Green, Thomas William	Sioux City
Greene, Harry Martin	Avoca
Gunderson, Carl Oscar	Kensett
Haney, Homer Eddison	Oregon, Ill.
Hart, William Richard	Oelwein
Hill, George Edgar	Burlington
B. Ph., 1903	
Ink, Floren Lewis	Mt. Vernon
Kelly, James Edwin	Hudson
Kunz, John Franklin	Wesley
B. Ph., 1904	
Lambert, Clarence Joseph	Adrian, Ill.

Lawrence, Arthur Garfield	Hopkinton
B. S., 1903, Lenox College	
MacGowan, Alvah Earl	Clear Lake
McDowell, Earl	Ames
McHugh, Roderick Emmet	Sioux City
Meakim, Roger Joseph	Burlington
B. S., 1904	
Miller, Claude Melvin	Iowa City
Neas, Harry Mackey	Sigourney
Overbaugh, John Edwin	Clarion
B. Ph., 1903, Cornell College	
Paige, Constant Anton	Laurens
Pasley, Crockett Hector	Nevada
Perkins, Daniel R	Carson
B. Ph., 1901	
Ramsell, Richard Roemer	Ottumwa
Ramseyer, Christian William	Bloomfield
M. Dl., 1902, Iowa State Normal	
Salinger, Louis Howard	Carroll
Schneider, Daniel Detrich	Hinton
M. Dl., 1902, Iowa State Normal; B. Ph., 1904	
Severin, Carl Frederick	Cedar Falls
Sifford, Ross	Wall Lake
Simpson, Samuel S.	Axtel, Kansas
Sims, Walter Lawson	Newton
Steck, Daniel Fredric	Ottumwa
Thompson, Fred F.	Brooklyn
B. A., 1903, Cornell College	
Walker, Henry Grass	Iowa City
Walker, Traffer V.	Denison
White, Warren Henry	Iowa City
B. A., 1904	
Wray, Frederick E.	Curtis
Yessler, Joseph Urvin	Western College
B. Ph., 1902, Coe College	

SECOND YEAR

Bailey, Hugh Lee	Iowa City
Barnard, Charles Robert	Clarion
B. Ph., 1904, Iowa College	
Barrick, Edward Joseph	Des Moines
Barton, James Frank	Ft. Dodge

Boland, James McNamara	Dubuque
Bracewell, Hollie Broughton	Corydon
B. Ph., 1889, University of Michigan	
Burnquist, Bert Blaine	Ft. Dodge
B. Ph., 1905	
Collinson, William	Chariton
Cropin, John Francis	Marengo
Edwards, William C.	Epworth
Evans, John Wesley	Decatur, Ill.
Fay, Wylie Webb	Nevada
B. Ph., 1905	
Files, Ray	Iowa City
B. Ph., 1905	
Goodwin, James Edwin	Burt
B. S., 1905	
Gray, Claude Cannie	Springdale
Hammill, George, Jr.	Britt
Henneger, Henry	Bellevue
Jordan, John Walter	Boone
B. S., 1904, Iowa State College	
Kelley, Emmet Joseph	Ft. Dodge
Kelley, James Edmund	Lamoni
Kerberg, Sidney Conkey	Sanborn
Kluckholm, George Wesley	LeMars
Ladd, Clarence Estabrook	Estherville
Lamb, James J.	Davenport
Lantry, Charles Cleveland	Algona
Law, Harvey Edward	Waterloo
MacArthur, Wheaton Alexander	Burt
McCullough, Clara Elizabeth	Osage
M. Ed., 1903, Iowa State Normal; B. Ph., 1905	
McMurray, William Berlin, Jr.	Savannah, Ga.
McPartland, George Parnell	Burlington
Maher, Frank C.	Ft. Dodge
Nichol, Frank A.	Albia
Ontjes, Frederick Anton	Aplington
Parsons, Harry Olin	Rock Rapids
Ranck, Lee Everett	Iowa City
Reed, James Paul	Muscatine
B. S., 1902, Valparaiso College	
Rhodes, Dorsey L.	Correctionville
Rogers, Howard Omar	Cedar Falls

Rue, Ole O.
 Schenk, Ernest Alvin
 Scherling, Louis Conrad
 Schnare, Frederick William
 Shifflet, James Glenn
 Smith, Paul Warren
 Streff, Joseph Nicholas
 M. D., 1904, Iowa State Normal
 Stuart, Hugh Patrick
 Thom, George, Jr.
 Walter, Earl Philip
 Watson, Grover Cleveland
 Watters, William Oral
 B. S., 1904, Parsons College
 Wilson, George Allison
 Woodward, Carlton Hutchins

Ridgewood
 Clinton
 Parkersburg
 Davenport
 Malcom
 Waterloo
 Alton

 Dubuque
 Correctionville
 Hartley
 Iowa City
 Fairfield

 Menlo
 Council Bluffs

FIRST YEAR

Adams, Chester A.
 Allen, Ward Malcolm
 Anderson, Loyd Lewis
 Bailey, Joel Daighton
 Ball, Walter McDowell
 Barrett, Edward Cecil
 Baskerville, Ernest Roscoe
 Beardmore, Thomas Alfred
 Berry, Alfred Raymond
 B. A., 1905, Cornell College
 Blazek, Joseph Morton
 Blezek, Antone
 Burgeson, Evañ Gerald
 Burling, William Hale
 Carrell, Dale Everett
 Chase, Eugene Webster
 Coughlon, Michael Charles
 Cowin, Rhey Newton
 Crow, Guy A.
 Cullison, Shelby
 Eaton, Arthur J.
 Ely, Clarence LeRoy

Akron
 Castalia
 Estherville
 Britt
 Iowa City
 Burlington
 Iowa Falls
 Dorchester
 Mount Vernon

 Elberon
 Oxford Junction
 Kensett
 Postville
 Iowa City
 Clear Lake
 Fort Dodge
 Waterloo
 Mapleton
 Harlan
 Waukon
 Maquoketa

Ficke, Arthur Davison

B. A., 1904, Harvard University

Figge, Alphonse Otto

Foster, Carl Sidney

Frost, Charles Phinehas

Geddes, Arthur Wesley

Greenleaf, Harold Stephen

B. S., 1905, Parsons College

Henry, Bert William

Hogue, Albert Whitacre

Johnson, Wilber

Keith, Jesse Edson

Kelly, Wayne

LaForce, Charles

Lamm, Louis A.

Lovell, Lafayette Washington

McFadden, William J.

Matson, Samuel B.

Mitchell, Lafayette Douglas

B. S., 1905, Northern Illinois College

Morgan, Edward Joseph

Morgan, Francis Joseph

Morrissey, Lawrence Michael

Mueller, Oscar Otto

Mullan, Alfred William

Mullan, Donald Gordon

Nolte, Grover Cleveland

O'Brien, Floyd B.

O'Hern, Daniel Lawrence

Otis, Arthur Howard

Patrick, Frank Stephen

Ramsell, William M.

Randall, Frank Hall

B. A., 1902

Reeburgh, Scott Leverett

Rowland, Morris Downs

St. Clair, Paul Sumner

Seidel, Aaron Exie

Sellers, Frederic Walter

Smead, John Rider

B. Ph., 1902, Upper Iowa University

Davenport

Ossian

Guthrie Center

Washta

LaHarpe, Ill.

Fairfield

Strawberry Point

West Liberty

Clear Lake

Goldfield

Rock Rapids

Ottumwa

Harlan

Monticello

Atlantic

Kossuth

Lyons

New Market

Carroll

Ottumwa

Van Meter

Waterloo

Pomeroy

Guttenberg

Ames

Barnum

Glenwood

Tama

Ottumwa

Denison

Battle Creek

Milton

Des Moines

Mason City

Cherokee

Iowa City

Sweesy, Walter James	Maquoketa
B. S., 1904, Cornell College	
Thornell, Andrew V.	Sidney
B. A., 1905, Wabash College	
Toogood, Everett Arthur	Grundy Center
Walton, Ernest Lindsley	Calmar
Weeks, Charles Warren	Iowa City
B. S., 1898, State University Nebraska	
Whiting, Nathan Dudley	Iowa City
Ph. G., 1904	
Wilkes, Harry Ordell	Centerville
Wolfe, Cressy C.	Bagley
Young, David Lawrence	Sioux City
B. Ph., 1905, Morningside College	

SPECIAL

Nyere, George Louis	Cedar Rapids
LL. B., 1904, Notre Dame University	

UNCLASSIFIED

Barney, Hiram, Jr.	Keokuk
Bowman, Ronald Dwight	Leon
Dixon, Charles Bert	Washington
Elliott, Edward Gregory	Epworth
Leach, Robert Lyman	Adel
Rathbun, Don Seavey	Kingsley
Roddewig, Louis Ernest	Davenport
Sheehan, Daniel Henry	Watervliet, N. Y.
Sulek, Edward	Solon
Trousdale, Robert Edwin	Grundy Center
B. Ph., 1900, Cornell College	

COMBINED COURSE

Atherton, Loren George	New Sharon
Baird, Justus Nathan	Keosauqua
Breese, Garfield Eugene	Iowa City
Fitz, Earl Moore	Panora
Fitzgerald, Edward Clarence	Rock Rapids
Fritzel, Carl C.	Conrad

Healy, William	Lisbon
Henke, Louis	Greene
Jones, Ralph Emerson	Williamsburg
Joy, William Bixby	Iowa City
Kelley, James Madison, Jr.	Macedonia
Lemon, Frank Carl	Guthrie Center
Payne, Paul Marvin	Linden
Price, Hiram T.	Iowa City
Redfield, Roy Addis	Ruthven
Rinker, Purly	Seymour
Wallace, Arthur Clarence	Rock Rapids

THE COLLEGE OF MEDICINE

DEGREES CONFERRED JUNE, 1905

Allen, Ray Wallace

B. S., 1902

Atkins, George Leslie

Bailey, Frederick William

B. S., 1902; M. S., 1904

Bailey, John William

Besore, Albert Leroy

Blackmore, Harriet Narcissa

Blair, Fred Leroy

Bowers, Bert Alfred

Bowie, Louis Lee

Bowser, William Francis

B. A., 1898

Brackney, Herman John

Briggs, Francis William

B. S., 1899

Brown, Joe Wesley

Busta, Charles

Christiansen, James

M. D., 1901, Iowa State
Normal

Collins, Joseph Sylvester

Conmey, Roy Merrill

Dunkel, George Kasper

Echternacht, Arthur Charles

Ellyson, Charles Wright

B. S., 1901, Cornell College

Ericsson, Charles Melvin

Etzbach, Joseph Frank

Fallows, Howard Daniel

Fox, Walter Henry

Goff, Harry LeRoy

Griffin, Frank Leo

Hall, Ray Edwin

Hands, Sidney Gillott

Hanson, Clarence Henry

B. S., 1903

Happe, Francis Alfred

Heard, Mary Kathrina

Ph. C., 1892, Univ. of Mich.

Hexom, John Daniel

B.-A., 1901, Luther College

Hoffman, Paul McConnell

B. S., 1901

Hoover, Alden Robbins

B. S., 1902

Housholder, Harold A.

Jaenicke, Kurt

Joynt, Martin John

B. S., 1903

King, Thomas Andrew, Jr.

Krider, Edward Edson

Long, Thomas Lee

B. D., 1900, Iowa State
Normal

Lynn, Arthur Ray

Matson, John Archie

B. S., 1903

Maurer, Harvey Charles

Morton, William Glasspell

Murphy, Frank Eugene

Nimocks, Sara Ausbon

Noland, Clyde Amandee

Prescott, Lee Washbon

Richey, Albert Roy

Sells, Benjamin Bert

Soper, Fred Clifford

Stelling, Charles Henry An-
drew

Stoltenberg, Walter Peter	Vaughan, Claude Luverne
Thomas, Clarence I.	Walker, Evahn Russell
Thompson, James Reed	B. S., 1900, Iowa State College
Thornburg, William Vestal	Weir, Matt Blakely
Turner, Edward Marsh	Wolverton, William Curtis
Van Metre, Richard Thompson	Yavorsky, George William

FOURTH YEAR

Albert, Fred, Jr.	Reinbeck
B. Ph., 1903; M. S., 1905	
Riebesheimer, George Allen	Vinton
Boiler, William Fred	Muscatine
Brisbine, Royal Ellis	Downey
Brown, Harry William	Waterloo
Burroughs, Paul Revere *	Allison
B. S., 1902, Drake University	
Byrnes, Ralph Leonidas	Iowa City
B. S., 1902	
Charlton, Max Rosecrans	Clear Lake
B. S., 1903; M. S., 1905	
Crary, Archie West	Boone
B. S., 1897, Cornell College; LL. B., 1904	
Cretzmeyer, Frank Xavier	Waverly
Cuthbert, William Henry	Canton, S. Dak.
Davis, John Graham	Indianola
Decker, Herbert Morgan	Davenport
D. D. S., 1898	
Durkee, Harry Charles	Charles City
Gray, Luther Martin	Cedar Rapids
Harned, Calvin Waldo	Lone Tree
D. D. S., 1903	
Hartwell, Samuel Willard	New Hampton
Hennessy, Albert Vincent	Iowa City
Jarvis, Harry Dwight	Rose Hill
Keehl, Walter Edward	Battle Creek
D. D. S., 1903	
Kessler, James Claude	Iowa City
Kidd, Floyd Snelson	Iowa City
Lashbrook, Elam Eugene	Waverly
Lindsay, Harry Alexander	Independence
Lott, Guy Alexander	Iowa City
Love, Francis Leonard	Manson

McGregor, James Charles	Davenport
McLean, Ray Allyn	Fayette
B. S., 1900, Upper Iowa University	
McMahon, Thomas	Victor
Maher, Thomas Augustine	Fort Dodge
Maris, Gerritt	Orange City
Messenger, Fred Henry	Newell
Moore, Walter Newlon	Iowa City
Murphy, Harry Wilton	Waterloo
Negus, Alvah	Iowa City
B. A., 1890; M. A., 1899, Penn College	
Negus, Mrs. Cora Weber	Iowa City
Orr, William Graham	Iowa City
Qualfe, Lawrence Albert	Nashua
B. Ph., 1903, Iowa College	
Richards, Carl Ernest	Red Oak
Rowe, Frank Noyes	Iowa City
Savage, Samuel Micajah	Salem
Smith, Homar A.	Mt. Vernon
B. S., 1902, Cornell College	
Starr, Charles Freeman	Emmetsburg
Struck, Kuno Herbert	Davenport
Stuhler, Louis	Monticello
Taylor, Maude Estella	Iowa City
B. S., 1904	
Thornburg, Willard Newell	Adel
Tierney, Charles Matthew	New Hampton
Wessel, Perry H.	Moline, Ill.
West, Walter Ernest	Corydon
White, Edward Harvey	Correctionville
Wickman, Herman John	New Hampton
Williams, Creighton David	Neola
Woods, Arthur Daniel	Greenfield

THIRD YEAR

Allen, George Henry	Iowa
Arthur, William Richard	Iowa
Averkieff, Olga	South Dakota
Barker, Ernest Edward	Iowa
Barnett, Reu Lee	Iowa
B. Di., 1903, Iowa State Normal	
Bateman, Howard William	Wisconsin

Benedict, Byron Irvin	Iowa
Bittner, Edward William	Iowa
Bone, Merle	Iowa
Bowie, Cecil Claude	Iowa
Breen, William	Iowa
Brittall, Chancey Lee	Iowa
Burk, Frank Oscar	Iowa
B. A., 1901, Augustana College	
Burket John Anson	Iowa
Cadwallader, Joseph Maxwell	Iowa
Carter, Edward Albert	Iowa
B. Ph., 1903	
Cocklin, William Karl	Iowa
Cook, Fred Sutton	Iowa
Darland, Fred Lambert	Iowa
Ph. G., 1902, Drake University	
Dixon, Arthur	Massachusetts
Donovan William Henry	Iowa
Doran, Thomas Cyrus	Iowa
Eland, Thomas Longley	Iowa
B. D., 1900, Iowa State Normal	
Ensley, Bruce	Iowa
B. S., 1903, Penn College	
Farrell, John Hogan	Iowa
Garvin, Thomas Martin	Iowa
Glase, Robert Lincoln	Utah
Gonterman, Emery Oliver	Iowa
Harken, Conreld Rex	Iowa
Hayden, Clara May	Iowa
Hennessy, Felix Alphonsus	Iowa
Hobart, Agnes Jane	Iowa
Howell, Elias Burton	Iowa
Huntington, Bert Roy	Iowa
Jaynes, Manning	Iowa
M. D., 1898, Iowa State Normal	
Kelly, Ray Arthur	South Dakota
Kleinsorge, Rudolph Ernst	Iowa
B. S., 1904	
Leipold, Arthur Thomas	Illinois
Malmgren, Theodore John	Iowa
B. A., 1903, State University of South Dakota	
Martin, George Henry	Iowa
Meents, Diedrich Janssen	Illinois
Neuzil, William James	Iowa

Oldag, George Charles	Iowa
Reed, Paul	Iowa
Roberts, Vernon	Iowa
Sackett, Roy Floyd	Iowa
Schenck, Charles Plume	Iowa
B. S., 1904	
Schipfer, Lloyd Albert	Iowa
Seerley, Clem Clifford	Iowa
M. D., 1901, Iowa State Normal; B. S., 1904	
Stecker, Mrs. Bertha E. Schenck	Iowa
Stewart, William Lloyd	Iowa
Valkenaar, Frederick William	South Dakota
Voss, Otto Rudolph	Iowa
Walsh, John Graney	Iowa
B. S., 1903	
Ward, Everett Chapman	Iowa
Wells, Nelson Dave	Iowa
B. Ph., 1901, Iowa Wesleyan University	
Wilkinson, Levi Jennings	Iowa
Willson, Mrs. Marion Orr	Iowa
Wintenburg, Edward J.	Iowa
Woodcock, Dick	Iowa

SECOND YEAR

Baer, DeWitt	Iowa
Baker, John Elmer	Iowa
Bemis, George Arthur	Iowa
Blattspleler, Arnold Charles	Iowa
Bosley, Carl Estep	Iowa
Bradley, Frank Timothy	Iowa
Brinton, William Thomas	Iowa
B. S., 1905	
Bruechert, Henry Nicholas	Illinois
Burns, Richard Earl	Iowa
Butts, Charles Edwin	Iowa
Creamer, Frank Harrison	Iowa
Crow, Ira Nelson	Iowa
Deily, Henry Clay, Jr.	Iowa
Devine, John Andrew	Iowa
Henneger, William Andrew	Iowa
Herrick, Rupert Connor	Iowa
Houston, Bush	Iowa

Husted, Horace Lee	Iowa
Ivins, Harry Morgan	Iowa
B. S., 1904	
Kimball, John E.	Iowa
Knox, Thomas Clifford	Iowa
Lauder, Clark Hayes	Iowa
B. Ph., 1905, Parsons College	
Leith, George Guyford	Iowa
Leonard, Bertram Bryant	Iowa
Loes, Anthony Michael	Iowa
McElderry, Donald	Iowa
McGuire, Roy Alvin	Iowa
McHugh, Charles Parnell	Iowa
Mann, Harry H.	Iowa
Marcy, Guy Elliott	Washington
Ph. G., 1904, Vashon College, Washington	
Mighell, Winfred	Iowa
Missman, Walter Frank	Iowa
Newbern, Lester F.	Iowa
Newell, Harris Andrews	Iowa
Olson, Clarence Leonard	Iowa
Parker, Edward Stuart	Minnesota
Ringena, Engelke Janssen	Iowa
Rockwood, Merle Clinton	Iowa
Runyon, Will D.	Iowa
Sather, Allen	Minnesota
Shine, Dan W.	Iowa
Slyfield, Frederick Albert	Iowa
Smith, Edgar Francis	Iowa
Strong, Arthur Churchill	Iowa
Tanner, Lawrence John	Iowa
Tripp, LeRoy Richard	Iowa
Vollum, Edward Oscar	Minnesota
B. A., 1904, Luther College	
Williams, Thomas Jefferson	Iowa
Woodhouse, George Raymond	Iowa
Woodworth, Leonard Forrest	Iowa

FIRST YEAR

Anderson, Loyd Lewis	Iowa
Anthony, Ernest Joseph	Iowa
Beltzer, Charles Eugene	Nebraska

Boland, Arthur Edward	Iowa
Brown, Ralph Waldo	Iowa
Brugman, Francis Albert	Iowa
Campbell, Thomas Roy	North Dakota
Colleston, Charles Chapman	Iowa
Corson, Herbert Henry	Iowa
Cramblit, Lue Donald	Iowa
Dolmage, George Francis	Iowa
Elmore, Stewart Bertram	Iowa
Fitzpatrick, Matthew Joseph	Iowa
Fugard, Harry Bell	Colorado
Fuller, Florence Catherine	Iowa
Goodenow, Sidney B.	Iowa
Greene, Emmett Amos	Iowa
Hagedorn, Harry Herbert	Iowa
Hall, Forest Frank	Iowa
Hamilton, Benjamin Charles, Jr.	Iowa
Hasskarl, Walter Fred	Iowa
Henry, Carl David	Colorado
B. Ph., 1902, University of Colorado.	
Hertz, Henry John	Iowa
Hoffman, Louis George	Iowa
Hoffman, Arthur Grafton Wright	Wisconsin
Jay, Leon Downie	Iowa
Joyce, Edward	Iowa
Klima, Hermenegild	Maryland
Kraushaar, Fridolin John Otto	Iowa
B. A., 1905, Wartburg College	
Lamb, Leonard Lucius, Jr.	Iowa
Leighton, Isaac Wellman	Iowa
Lewis Laura Iowa	Iowa
B. S., 1904	
Loney, James Stephen	Iowa
McBride, James Fred	Illinois
McClanahan, James Harold	Iowa
Martin, Worley George	Iowa
B. A., 1900	
Mast, Bernard William	Wisconsin
Mast, Cornelius Herman	Wisconsin
Matthey, Walter Alfred	Iowa
Miller, Albert Arthur	Iowa
B. S. A., 1904, Iowa State College	

Mueller, Otto Henry	Iowa
B. A., 1903	
Murdy, Robert Beecher Carson	Iowa
Netolicky, Joseph	Iowa
B. S., 1904, Coe College	
Nilson, Frederic Cornelius	South Dakota
Nystrom, Elmer Edwin	Illinois
Osnes, Elias N.	South Dakota
Padgham, James Blaine	Iowa
Padgham, John F.	Iowa
Peck, John Hyren	Iowa
Pence, John Robert	Iowa
Seaman, Jess Allen	Iowa
Seeley, William Thomas	Iowa
Seeman, Frederick J.	Iowa
Shenkowitz, Karl Rose	Iowa
Sherman, Richard Charles	Iowa
Sleeter, Ralston William	Iowa
Stinson, Frank DeWitt	Iowa
Thompson, Arthur Peter	Iowa
Tinsley, Cline Grover	Iowa
Vincent, Paul Revere	Iowa
Wachenfeld, Carl Henry	Iowa
Waterman, Isaiah John	Iowa
Westly, Soren S.	Iowa
Wheeler, Alfred Minot	Michigan
Wieben, Ferdinand Frederick	Iowa
Will, Frank Arthur	Iowa
Willcutt, Clarence Elvin	Iowa
Willett, Frederick Ewing	Iowa

UNCLASSIFIED

Anderson, Rudolph Martin	Iowa
B. Ph., 1903	
Ankrum, Fred Leslie	Iowa
Ph. G., 1903, Highland Park College	
Barta, Frank Albert	Iowa
Burbank, Dean S.	Iowa
Closson, Charles Logan	Iowa
Cochran, Ray Clark	Iowa
Hartley, George A.	Iowa

STUDENTS—THE COLLEGE OF MEDICINE 563

Holiday, Frank	Iowa
Hopewell, Austin Nelson	Nebraska
Hudson, Jessie Blanche	Iowa
B. S., B. L., 1893, Iowa State College	
Hurley, William James	Iowa
Lambert, John Joseph	Iowa
M. D., 1897, Iowa State Normal; B. Ph., 1899; M. S., 1901	
Langdon, Ila Gertrude	Iowa
B. D., 1898, Iowa State Normal	
McLane, Arthur C.	North Dakota
B. Ph., 1904	
Miller, Harry Arthur	Iowa
Morrison, Charles Henry	Iowa
Patterson, Alpheus Wood	Iowa
Rogers, Thomas Lowry	Iowa
Rohrig, John George	Iowa
Rule, Edward Arthur	Iowa
Shekwana, Paul	Iowa
Shryer, Julius Louis	Iowa
Williamson, James William	Iowa
Wilson, Clarence Errol	Iowa

COMBINED COURSE

Coulter, Wilbur Edwin	Iowa
Duncan, Cleveland Reuben	Iowa
French, Royal F.	Iowa
Kacherian, Hovhannes Sarkis	Iowa
Riemcke, Charles August	Iowa
Stearns, Robert Wilson	Iowa

THE NURSES' TRAINING SCHOOL

CERTIFICATES CONFERRED JUNE, 1905

DeGarmo, Lutie Parmelia	Millard, Bessie Pearl
Errickson, Margaret Nina	Robertson, Mae
Mahood, Sarah	

THIRD YEAR

Broadie, Jane Isabel	Iowa
Lins, Leta Wilhelmina	Iowa
Myers, Rena Emily	Iowa
Rooney, Mary Regina	Iowa

SECOND YEAR

Coe, Isabel Catherine	Iowa
Hamilton, Mary	Iowa
Laurer, Lola	Iowa
Metcalf, Agnes	Iowa
Murdock, Marie Genevieve	Illinois
Rush, Mary	Iowa
Seeds, Bertha Willa	Washington, D. C
Sweitzer, Jennie Maude	Iowa

FIRST YEAR

Anderson, Emma	Illinois
Bolks, Frances	Iowa
Campbell, Bessie Ann	Iowa
Crowley, Rose Winifred	Iowa
Curtis, Edna Anna Marie	Iowa
Everett, Emma Dolorosa	Iowa
Franke, Grace F.	Iowa
Miller, Ida May	Iowa
Norris, Caroline	Iowa
Scott, Maude	Colorado
Toomey, Hannah	Iowa
Wright, Katherine	Iowa

SUMMER SESSION

Belt, A. L., M. D.	Fountain, Charles B., M. D.
Burge, Albertus J., M. D.	Van Epps, Clarence, M. D.
Emmert, J. M., M. D.	

THE COLLEGE OF HOMEOPATHIC MEDICINE

DEGREES CONFERRED JUNE, 1905

Clark, Carl George	Okerlin, Oscar William
Humeston, Frank Enos	Parsons, Harry Clifford
Ingersoll, Perry Grant	Quaife, Howard Herman
Kaufman, Ernest Leslie	D. D. S., 1903
Macomb, Thomas T.	Volland, Roscoe Henry
	D. D. S., 1902

GRADUATE STUDENTS

Lyons, Mrs. Angeline Esther	Kansas
Volland, Roscoe Henry	Iowa
D. D. S., 1902, M. D., 1905	

FOURTH YEAR

<i>Name</i>	<i>Residence</i>	<i>Preceptor</i>
Alden, Frederick	Iowa	Dr. C. J. Loizeaux
Bott, George Floyd	Iowa	Dr. F. A. Strawbridge
Cogswell, John Wilkinson	Iowa	Dr. C. H. Cogswell
B. S., 1904		
Ihle, Charles William	Iowa	Dr. W. A. Hamilton
Kingsbury, Ernest Mills	Iowa	Dr. George Royal
Royal, Lester Ambrose	Iowa	Dr. George Royal
Royal, Malcolm Allen	Iowa	Dr. George Royal
B. S., 1904		
Wildman, Murry	Iowa	Dr. C. C. Gethman

THIRD YEAR

Felt, Garnett Smith	Michigan	Dr. G. A. Huntoon
Landis, Henry Faris	Iowa	Faculty
D. O., 1903, Still College of Osteopathy		

Mosby, George	Iowa	Dr. F. Becker
Palmer, Ashley Bennett	Wash.	Dr. E. E. Beckett
D. D. S., 1887		

SECOND YEAR

<i>Name</i>	<i>Residence</i>	<i>Preceptor</i>
Brush, Milo Orion	Minn.	Dr. Thomas Lowe
Cron, Cyril McLane	Iowa	Dr. J. S. Cron
Dice, Harland Everett	Iowa	Dr. L. W. Struble
Gregg, Orion Russell	Iowa	Drs. Humphrey and Kauffman
McCall, John Harvey	Iowa	Dr. W. E. Anderson
McClellan, Earl Derward	Iowa	Dr. E. C. Kauffman
Manahan, Charles Albert	Iowa	Dr. M. A. Newland
Masson, Hervey Fulton	Iowa	Dr. W. E. Anderson
Park, Paul Archibald	Iowa	Dr. B. R. Johnston
Parsons, Carrell Dunham	Iowa	Dr. P. L. Parsons
D. D. S., 1900		
Power, Claude A.	Iowa	Dr. J. S. Cron
B. S., 1900, Southern Iowa Normal		
Scheib, Alvin Peary	Iowa	Dr. L. B. Carson
Sentman, Harry Palmer	Iowa	Dr. E. C. Kauffman

FIRST YEAR

<i>Name</i>	<i>Residence</i>	<i>Preceptor</i>
Aanes, Almer Melvin	Iowa	Dr. F. Becker
Brewster, Calvin Orville	Iowa	Dr. G. T. McDowall
Drake, Fred Edwin	Iowa	Dr. E. C. Kauffman
Fawcett, Arthur J.	Iowa	Dr. L. W. Struble
Folkins, Frank Howard	Iowa	Dr. D. F. E. Tiffany
Fulton, Charles Ralph	Iowa	Dr. R. A. Jacobson
Hines, William	Iowa	Dr. R. H. Gray
Johnson, Alfred	Iowa	Faculty
D. O., 1904, Still College of Osteopathy		
Kennedy, Frank Homer	Wisc.	Dr. W. R. Kennedy
Knott, George Charles	Illa.	Dr. B. R. Johnston
B. A., 1905, Coe College		
Lockwood, Ira Hiram	Iowa	Dr. J. A. Swallum
McCleary, Earnest Otis	Iowa	Dr. G. F. Seams

Mericl�, Carl James	Iowa	Dr. W. A. Hamilton
Mizener, Mark	S. Dak.	Dr. H. H. King
Nickerson, Frank Ray	Iowa	Dr. J. S. Cron
Rose, John Townsend	Iowa	Dr. F. T. Launder
Schroeder, Henry Albert	Minn.	Dr. W. A. Hamilton
Young, Howard	Iowa	Dr. R. H. Gray

UNCLASSIFIED

Aborn, Claude Elmer	Iowa	Dr. B. R. Johnston
Shaw, Albert Edward	Ill.	Dr. C. J. Loizeaux

NURSES' TRAINING SCHOOL

CERTIFICATES CONFERRED JUNE, 1905

Cates, Ora W.	Rich, Harriette Elsie
Clark, Sarah Beatrice	Trier, Sadie
Engeldinger, Susan	

THIRD YEAR

Dunham, Elsie Martha	Iowa
Seibert, Viola Rosetta	Iowa

SECOND YEAR

Dunham, Ethel Lucy	Iowa
King, Mabel	Iowa
Moyer, Ralph	Iowa
Simmons, Effie Amber	Iowa

FIRST YEAR

Albright, Esther May	Iowa
Fratzke, Maude	Iowa
Heckman, Mabele	Iowa
Hershire, Elizabeth	Iowa
Keller, Josephine Julie	Iowa
Parsons, Eva Amber	Mo.
Sterling, Ellen	Iowa
Winters, Hattie Mae	Iowa
Workman, Cecil	Iowa

THE COLLEGE OF DENTISTRY

DEGREES CONFERRED JUNE, 1905

Arnold, John Rubi	Leach, Don Sherman
Black, Amy Thornton	McCord, Alexander Ichabod
Crawford, Guy	Miller, Thomas Jefferson
Creighton, D. Murto	Molsberry, Frank Roland
De Mots, Henry	Seydel, Robert Ashable
Greenawalt, Richard Albert	Stryker, Clarence Andrew
Hurst, Thomas Henry	Vail, Glenn Winfred
Jeffers, Lyle Lawson	Whitsell, Loyd Lane

DENTAL ASSISTANT'S COURSE

Kennedy, C. Lillian

DEGREES CONFERRED FEBRUARY 22, 1906

Gay, John Charles	Myler, Melvin Wesley
Heykens, Herman	

GRADUATE STUDENTS IN DENTISTRY

Brady, Mrs. Augusta H.	Iowa
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THIRD YEAR

Brown, Mark D.	South Dakota
Christie, Bert Lee	Iowa
Daly, Frederic French	Iowa
Damon, Robert Enoch	Iowa
Farlien, Jacob Anderson	Iowa
Gay, John Charles	Iowa
Gibbs, Harry Emmons	Iowa
Heykens, Herman	Iowa
Horel, Charles Sidney	Iowa

Humeston, Fred Lee	Iowa
Hunsicker, Claude Linvill	Iowa
Knapp, Karl Wilson	Iowa
Kruger, Louis Frederick	Iowa
Lahman, Rush Clark	Iowa
Lister, Clarence Sylvester	Iowa
Moravec, Arthur John	Iowa
Myler, Melvin Wesley	Iowa
Payne, Charles Burton	Iowa
Polley, Lovette Morse	Iowa
Roosevelt, Theodore Tasheira, Jr.	Iowa
Schultz, Emory Jesse	Iowa
Schwin, Frederick William	Iowa
Scovel, John William	Iowa
Settell, Ansel Reuben	Iowa
Thomas, Cleveland Langrange	Iowa
Tilden, Julius Fredrick	Iowa
Van Doren, Orle Elmer	Iowa
Ward, Jesse	Illinois

SECOND YEAR

Bettice, Daniel	Iowa
Black, Guy Cameron	Pennsylvania
Carl, Cecil Earl	Iowa
Check, Frank James, Jr.	Iowa
Davis, Walter Clarence	Iowa
Duncan, Harley Dale	Iowa
Ehred, Claude Treichler	Iowa
Farnsworth, Frank Wilkinson	Iowa
Graham, George Dudley	Iowa
Greene, Emmett Amos	Iowa
Heit, Charles Lee	Illinois
Ph. G., 1903, Highland Park College	
Hemingway, John Dexter	Iowa
Hillweg, Charles Ulysses	Iowa
Joynt, Robert James	Iowa
Klaffenbach, Arthur Otto	Iowa
Lee, Herbert Wayne	Illinois
Leech, Chester Raymond	Iowa
Lockard, Adelbert	Iowa
McElderry, Chester Arthur	Iowa
McLeod, Earl Angus	Iowa

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McMartin, Kenneth	Iowa
Miller, Glen Ward	Iowa
Moravec, Edward L.	Iowa
Mueller, Carl William	Illinois
Neill, Fred A.	Iowa
Nye, Walter Sewell	Iowa
Percy, Roe Ernest	Iowa
Porter, Van Alex	Iowa
Robertson, Clarence Walker	Iowa
Saville, Burr George	Iowa
Shouse, Arthur Chester	South Dakota
Stealy, Elza Rollin	South Dakota
B. Ped., 1903, Colorado State Normal	
Stouffer, Clyde Homer	Iowa
B. A., 1904, Western College	
Swartzendruber, Joe Ray	Iowa
Towne, Roy Salem	Iowa
Ward, Griffy Golding	Iowa
Washburn, Roy Booth	Wisconsin
Weir, Charles Richard	Iowa
Wells, Ira Heydon	Iowa
Wilkinson, Charles William	Iowa
Wilson, James Matthew	Iowa
Ph. G., 1899, Highland Park College	
Wood, Harry T.	Iowa
Ziegler, Winfield Scott	Iowa

FIRST YEAR

Avery, George Emery	Iowa
Baker, Lloyd Lewis	Iowa
Boller, Ora Frank	Iowa
Butterfield, Clifford Guy	Iowa
Carney, Foster DeWitt	South Dakota
Carter, Edwin Otis	Iowa
Cates, Lawrence Allen	Iowa
Clemons, Guy Harvey	Iowa
Cole, Jasper Freeman	Nebraska
Coon, Lester Berle	Iowa
Crouter, Stephen Edward	South Dakota
DeBey, Neal	Iowa
Darling, Harry Riley	South Dakota
Denault, Eugene Vincent	Illinois

Denzler, John	Iowa
Dietrich, Ernest Oscar	Iowa
Diratzonian, Mekael	Turkey
Dixon, George Edward	Iowa
Drees, Lambert John	Iowa
Engelmann, Andrew	Iowa
Frazier, Max C.	Iowa
Fullerton, Ralph William	Iowa
Gault, John Sturdivant	Iowa
Gist, Nathan Howard	Iowa
Haines, Charles Earl	Iowa
Hamm, Alonzo Raby	Iowa
Harned, Walter Max	Iowa
Haselton, Harve Barden, Jr.	Iowa
Hathaway, James Charles	Iowa
Hicks, Stanley Taylor	Iowa
Hvistendahl, Nels Juel	Iowa
Irwin, Ralph McClure	Iowa
Johnston, Harry Greenfield	Iowa
Kallaus, William Fred	Iowa
Knapp, John	Iowa
Knott, Herman Aldrich	Iowa
Lewis, William A.	Iowa
Lyon, David Ernest	Iowa
McDowell, Carr H.	Iowa
McGreevy,, Leo Ross	Iowa
McKeown, Albert Gay	Iowa
McWilliams, Harold Arthur	Iowa
Martin, Orlando Elmer	South Dakota
Meade, Chester Lawrence	Iowa
Miller, Harold Anson	Iowa
Miller, Robert Edmund	Iowa
Mitchell, Harold Earl	Missouri
Molsberry, William Irving	Iowa
Nickols, Thomas Channing	Iowa
O'Connor, Herbert Frederick	Minnesota
Penniwell, Fred H.	Iowa
Peterson, Grant Benjamin	Iowa
Peterson, Ross C.	Iowa
Pitman, Harry Adelbert	Iowa
Plank, Frank Thomas	Iowa

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Pote, Rolland William	Iowa
Preston, Forrest Milton	Iowa
Reed, Glenn Freeman	Iowa
Richards, John Loftus	Iowa
Richey, Earl Lemuel	Iowa
Riedel, Barold Rudolf	Holland
Rogers, Ross Willard	Iowa
Rosheim, Eddie	Iowa
Schmitz, Henry Charles	Illinois
Smith, William Henry	Iowa
Stanard, Carl DeWitt	Iowa
Stanley, John Gruell	Iowa
Stockdale, Allen T.	Iowa
Stout, Clare Agne	Iowa
Tate, John Mills	Iowa
Teege, Harry	Iowa
Tokatlian, Mrs. Diroochi	Iowa
Tostlebe, Emil Nathan	Iowa
Wallace, Ray Harold	Iowa
Walton, James Blaine	Iowa
Wilkinson, George Robert	Iowa
Wolfe, William Allen	Iowa
Wood, Vaughn Asher	South Dakota
Yessler, Arthur M.	Iowa
Zeithammel, Edward	Iowa

UNCLASSIFIED

Adams, Albert Wesley	Iowa
Anderson, Frank Erwin	Iowa
Bohonek, Frank Joseph	Iowa
Boner, Frank Allen	Iowa
Crichfield, Fred Warren	Iowa
Crosby, Lucius	Iowa
Crossan, Orval Alexander	Iowa
Davis, Harry Scott	Iowa
Fankhauser, Homer Enoch	Iowa
Figg, Robert Miles	Iowa
Goldsberry, Clyde Cecil	Iowa
Graham, James Allan	Illinois
Greiner, Abraham J.	Iowa

Hall, Harry Atchison	Iowa
Huber, Theodore	Iowa
Lee, Clarence Leon	Iowa
Lockard, Harry Chapin	Iowa
McCreary, Anson Floyd	Iowa
Meyers, Johannes Henry	Iowa
Miller, Grover Cleveland	Iowa
Oleson, George Henry	Iowa
Ott, Leroy Theodore	Iowa
Phillips, Leon George	Illinois
Smead, Horace Hubert	Iowa
Vane, Lumir Frank	Iowa
Williams, John A.	Iowa

COMBINED COURSE

Rider, Thomas Thiel	Iowa
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THE COLLEGE OF PHARMACY

DEGREES CONFERRED JUNE, 1905

Allen, Earl	Seymour, Edith Maria,
Friedholdt, George Louis	B. S., 1899
Humphrey, Rollin Edward	Siebke, Henry
Manley, Bernard Edward	Workman, Ellsworth
Moore, Herbert Morse	

GRADUATE STUDENT IN PHARMACY

Brown, Adin Noyes	Missouri Valley
Cutler, Tyna M.	Nora Springs, Iowa

SECOND YEAR

Barta, Frank Albert	Fairfax
Brown, Adin Noyes	Missouri Valley
Cochran, Ray Clark	Guthrie Center
Dickson, Millard Ray	Luana
Dolan, Thomas William	Prairieburg
Fitzgibbons, Joseph E.	Dubuque
Heinrich, George Arthur	Blairstown
Johnson, Arthur	Carroll
Judd, Howard Garfield	Sheldon
Kiehl, Glen E.	Anita
Machacek, Joseph Frank	Cedar Rapids
Magennis, Joseph Leonard	Manson
Martin, Roy Kingman	Jefferson
Morrison, Clee Lane	Miles City, Mont.
Narum, Carl	Kensett
Proctor, Warren Joseph	Marcus
Richmond, Raymond Everett	Dallas Center
Sayers, Milton Cary	Jefferson
Schadt, Fred Conrad	Amana
Sylvester, Ralph Waldo	Clarence
Van Steenberg, John	Sioux Center
Warnecke, Fred Jakob	Sabula
Weaver, George Edwin	Conrad

FIRST YEAR

Bayless, Fred Niles	Iowa
Boruff, Otis	Iowa
Brink, Mrs. Blanche Woods	Iowa
Condon, John Vincent	Iowa
Davis, Bernard Henry	Iowa
Domina, Pearl	Nebraska
Gibson, Frank Ross	South Dakota
Grady, Otha Owen	Iowa
Granner, Earl Reuben	Iowa
Gray, Wayland Roberts	Iowa
Klinefelter, George Ray	Iowa
Martin, Alfred Henry	Iowa
O'Leary, Agnes Gertrude	Iowa
Rogers, Ora L.	Iowa
Selleck, Martin Fairchild	Iowa
Thompson, Edward William	Iowa
Walk, George Edward	Texas
Ware, Clarence Walter	Iowa
Weitgenaut, Wayne Weatherbee	Iowa
Witt, William John	Iowa

UNCLASSIFIED

Dress, Victor Morton	Iowa
Fishburn, Jesse J.	Iowa
Kuever, Rudolph Andrew	Iowa
Noonan, John Michael	Iowa
Peterson, Carrie Louisa	Nebraska
Robb, Robert Worth,	Iowa
M. D., 1904	
Swords, Lloyd William	Iowa

SUMMARY OF REGISTRATION

1905-1906

THE COLLEGE OF LIBERAL ARTS

	MEN	WOMEN	TOTAL
Fourth Year	63	65	128
Third Year	47	55	102
Second Year	53	69	122
First Year	84	102	186
Special	15	9	24
Unclassified	82	107	189
Professional students taking elective work	47	1	48
Total	391	408	799

THE GRADUATE COLLEGE

Candidates for the degree of Ph. D....	27	1	28
Candidates for the degree of M. A....	42	24	66
Candidates for the degree of M. S.....	20	2	22
Students not candidates for degrees..	14	36	50
Total	103	63	166

THE SUMMER SESSION, 1905

Graduate College	44	31	75
College of Liberal Arts	61	100	151
College of Medicine	5	...	5
Library Training School .....	...	18	18
Total	110	149	259

THE COLLEGE OF APPLIED SCIENCE

FOURTH YEAR—

Civil Engineering	12	...	12
Electrical Engineering	3	...	3

Mechanical Engineering .....	...	...
Mining Engineering	2	2
	<hr/>	<hr/>
	17	17
THIRD YEAR—		
Civil Engineering	14	14
Electrical Engineering	4	4
Mechanical Engineering	1	1
Mining Engineering	1	1
Forestry	1	1
	<hr/>	<hr/>
	21	21
SECOND YEAR—		
Civil Engineering	14	14
Electrical Engineering	11	11
Mechanical Engineering	5	5
Mining Engineering	2	2
Chemistry	1	1
	<hr/>	<hr/>
	33	33
FIRST YEAR—		
Civil Engineering	27	28
Electrical Engineering	21	21
Mechanical Engineering	9	9
Mining Engineering	12	12
Forestry	1	1
Chemistry	2	2
	<hr/>	<hr/>
	72	73
UNCLASSIFIED—		
Civil Engineering	10	10
Electrical Engineering	2	2
Mechanical Engineering	1	1
Mining Engineering	1	1
Forestry	1	1
	<hr/>	<hr/>
	15	15
TOTAL—		
Civil Engineering	77	78
Electrical Engineering	41	41

SUMMARY OF STUDENTS

579

Mechanical Engineering	16	...	16
Mining Engineering	18	...	18
Forestry	3	...	3
Chemistry	3	...	3
Liberal Arts students taking Applied Science Work.....	3	...	3
	<hr/>	<hr/>	<hr/>
Total	161	1	162

THE COLLEGE OF LAW

Third Year	58	...	58
Second Year	51	1	52
First Year	66	...	66
Special	1	...	1
Unclassified	10	...	10
Combined Course	17	...	17
	<hr/>	<hr/>	<hr/>
Total	203	1	204

THE COLLEGE OF MEDICINE

Fourth Year	52	2	54
Third Year	55	5	60
Second Year	50	...	50
First Year	66	2	68
Unclassified	22	2	24
Combined Course	6	...	6
Nurses' Training School .....	...	24	24
Summer Session	5	...	5
	<hr/>	<hr/>	<hr/>
Total	256	35	291

THE COLLEGE OF HOMEOPATHIC MEDICINE

	MEN	WOMEN	TOTAL
Graduate Students	1	1	2
Fourth Year	8	...	8
Third Year	4	...	4
Second Year	13	...	13
First Year	18	...	18
Unclassified	2	...	2

Nurses' Training School	15	15
	<hr/>	<hr/>
Total	46	62

THE COLLEGE OF DENTISTRY

Graduate Students	1	1
Third Year	28	28
Second Year	43	43
First Year	79	80
Unclassified	26	26
Combined Course	1	1
	<hr/>	<hr/>
Total	177	179

THE COLLEGE OF PHARMACY

Graduate Students	1	1	2
Second Year	22	...	22
First Year	18	2	20
Unclassified	6	1	7
	<hr/>	<hr/>	<hr/>
Total	47	4	51

Total including duplicates	1494	679	2173
Duplicates	219	139	358
Total excluding duplicates	1275	540	1815

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NEW SERIES NO. 151 MAY, 1907

STATE UNIVERSITY OF IOWA

IOWA CITY

CALENDAR

1906--1907

INCLUDING THE ANNOUNCEMENTS FOR 1907-1908

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IOWA CITY, IOWA

1907

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SIX NUMBERS EVERY CALENDAR YEAR. ENTERED AT THE POST OFFICE
AS SECOND CLASS MAIL MATTER.

THE
STATE UNIVERSITY OF IOWA

IOWA CITY

CALENDAR

1906--1907

PUBLISHED BY THE UNIVERSITY
IOWA CITY, IOWA
1907

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IOWA CITY

CALENDAR

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IOWA CITY, IOWA
1907

CALENDAR

1907

JULY

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1908

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DECEMBER

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THE UNIVERSITY CALENDAR

1907-08

1907

<i>June 7, Friday</i>	Anniversary exercises of the forensic societies, 8 P. M.
<i>June 9, Sunday</i>	Baccalaureate address, 4 P. M.
<i>June 10, Monday</i>	Class day exercises. Battalion drill and dress parade. Review by the Governor of Iowa, 4 P. M. Class play, 8 P. M.
<i>June 11, Tuesday</i>	Alumni day. Phi Beta Kappa address, 10 A. M. Alumni business meeting, 2 P. M. Alumni dinner, 6 P. M.
<i>June 12, Wednesday</i>	Commencement, all colleges, 10 A. M. President's reception, 4 P. M.
<i>June 13, 14, Thursday, Friday</i>	Examination for admission to all colleges.
<i>June 15, Saturday</i>	Registration for the Summer Session, 9 A. M.
<i>June 17, Monday</i>	Instruction begins in the Summer Session, 7. A. M.
<i>July 25, 26, Thursday, Friday</i>	Examination by the State Board of Educational Examiners.
<i>July 27, Saturday</i>	Summer Session ends.
	SUMMER VACATION
<i>Sept. 18, Wednesday</i>	Examination for admission. Registration in all colleges, 2 P. M. Students may register by mail or in person at any time during the summer vacation.
<i>Sept. 23, Monday</i>	Instruction begins in all colleges, except the Graduate College, 8 A. M. University convocation; address by the President, 4 P. M.

<i>Oct. 1, Tuesday</i>	Instruction begins in the Graduate College.
<i>Nov. 23, Saturday</i>	First quarter ends, 10 P. M.
<i>Nov. 25, Monday</i>	Second quarter begins, 8 A. M.
<i>Nov. 28, Thursday</i>	Thanksgiving Day. All exercises suspended only for the day.
<i>Dec. 20, Friday</i>	Holiday recess begins, 10 P. M.
1908	
<i>Jan. 7, Tuesday</i>	Work resumed in all colleges, 8 A. M.
<i>Feb. 8, Saturday</i>	First semester ends, 10 P. M.
<i>Feb. 10, Monday</i>	Second semester begins, 8 A. M.
<i>Feb. 21, Friday</i>	Annual lecture of the Sigma Xi, 8 P. M.
<i>Feb. 22, Saturday</i>	Washington's Birthday. University convocation. All other exercises suspended.
<i>April 15, Wednesday</i>	Third quarter ends, 10 P. M.
<i>April 21, Tuesday</i>	Fourth quarter begins, 8 A. M.
<i>May 30, Saturday</i>	Memorial Day. All exercises suspended.
<i>June 12, Friday</i>	Anniversary exercises of the forensic societies, 8 P. M.
<i>June 14, Sunday</i>	Baccalaureate address, 4 P. M.
<i>June 15, Monday</i>	Class Day exercises. Battalion drill and dress parade. Review by the Governor of Iowa, 4 P. M. Class play, 8 P. M.
<i>June 16, Tuesday</i>	Alumni day. Phi Beta Kappa address, 10 A. M. Alumni business meeting, 2 P. M. Alumni dinner, 6 P. M.
<i>June 17, Wednesday</i>	Commencement, all colleges, 10 A. M. President's reception, 4 P. M.
<i>June 18, 19, Thursday, Friday</i>	Examination for admission to all colleges.
<i>June 20, Saturday</i>	Registration for the Summer Session, 9 A. M.
<i>June 22, Monday</i>	Instruction begins in the Summer Session, 7 A. M.
<i>July 30, 31, Thursday, Friday</i>	Examination by the State Board of Educational Examiners.
<i>Aug. 1, Saturday</i>	Summer Session ends.

SUMMER VACATION

Sept. 16, Wednesday

Examination for admission.

Registration in all colleges, 2 P. M.

Students may register by mail or in person at any time during the summer vacation.

Sept. 21, Monday

Instruction begins in all colleges except the Graduate College, 8 A. M.

University convocation; address by the President, 4 P. M.

Sept. 29, Tuesday

Instruction begins in the Graduate College.

Nov. 28, Saturday

First quarter ends.

BOARD OF REGENTS

MEMBERS EX-OFFICIO

*His Excellency, ALBERT B. CUMMINS, Governor
of Iowa*

*JOHN F. RIGGS,
Superintendent of Public Instruction*

TERMS EXPIRE 1908

FOURTH DISTRICT—ALONZO ABERNETHY, *Osage*

ELEVENTH DISTRICT—PARKER K. HOLBROOK, *Onawa*

TENTH DISTRICT—E. K. WINNE, *Humboldt*

THIRD DISTRICT—CHARLES E. PICKETT, *Waterloo*

TERMS EXPIRE 1910

FIFTH DISTRICT—THOMAS B. HANLY, *Tipton*

EIGHTH DISTRICT—JOHN W. LAUDER, *Afton*

NINTH DISTRICT—VERNON L. TREYNOR, *Council Bluffs*

TERMS EXPIRE 1912

SIXTH DISTRICT—WILLIAM D. TISDALE, *Ottumwa*

FIRST DISTRICT—JOHN J. SEERLEY, *Burlington*

SECOND DISTRICT—JOE R. LANE, *Davenport*

SEVENTH DISTRICT—CARROLL WRIGHT, *Des Moines*

OFFICERS OF THE BOARD

LOVELL SWISHER, *Iowa City*.....TREASURER

WILLIAM J. McCHESNEY, *Iowa City*.....SECRETARY

GILBERT H. ELLSWORTH, *Iowa City*.....SUPERINTEN-

DENT OF CONSTRUCTION, MAINTENANCE AND GROUNDS

PARKER K. HOLBROOK

ALONZO ABERNETHY

JOE R. LANE

JOE R. LANE.....DELEGATE TO THE SENATE

EXECUTIVE COMMITTEE

COMMITTEES OF THE BOARD OF REGENTS

AUDITING COMMITTEE—Regents Tisdale, Hanley, and Lauder.

COMMITTEE ON BUILDING AND GROUNDS—Regents Lane, Holbrook, Abernethy, and Wright.

COMMITTEE ON THE COLLEGE OF LIBERAL ARTS—Regents Pickett, Holbrook, Lane, Riggs, and Winne.

COMMITTEE ON THE COLLEGE OF LAW—Regents Wright, Hanley, Tisdale, Lane, Pickett, and Seerley.

COMMITTEE ON THE COLLEGES OF MEDICINE AND HOMEOPATHIC MEDICINE—Regents Hanley, Lane, Riggs, Lauder, and Treynor.

COMMITTEE ON THE COLLEGE OF DENTISTRY—Regents Lauder, Wright, and Winne.

COMMITTEE ON THE COLLEGE OF PHARMACY—Regents Lane, Treynor, and Winne.

COMMITTEE ON THE GRADUATE COLLEGE—Regents Tisdale, Abernethy, and Seerley.

FINANCE COMMITTEE—Regents Abernethy, Holbrook, Pickett, Hanley, and Lane.

COMMITTEE ON HONORARY DEGREES—Regents Holbrook, Wright and Riggs.

COMMITTEE ON THE HOSPITALS—Regents Lauder, Treynor, and Winne.

COMMITTEE ON LEGISLATION—Regents Pickett, Abernethy, Holbrook, Lane, Tisdale, Wright, Lauder, Hanley, Treynor, Seerley, and Winne.

COMMITTEE ON LIBRARY AND APPARATUS—Regents Holbrook, Riggs, and Winne.

COMMITTEE ON NATURAL HISTORY COLLECTIONS—Regents Treynor, Pickett, and Abernethy.

COMMITTEE ON SALARIES—Regents Pickett, Wright, Hanley, Lane, Tisdale, and Winne.

THE ADMINISTRATIVE OFFICERS

THE UNIVERSITY

GEORGE EDWIN MACLEAN, LL. D., President.
ELMER ALMY WILCOX, B. A., Secretary of the University Senate.
THOMAS HUSTON MACBRIDE, PH. D., Director University Extension.
WILLIAM CRAIG WILCOX, M. A., Secretary University Extension.
HERBERT CLIFFORD DORCAS, M. A., University Examiner and Registrar.
ALICE BRADSTREET CHASE, Executive Clerk.
FRED COLLINS DRAKE, B. PH., Secretary to the President and University Editor.
MABLE MONTGOMERY VOLLAND, B. A., Acting Dean of Women.
FOREST CHESTER ENSIGN, M. A., Inspector of Schools.
COLONEL CHARLES WARREN WEEKS, U. S. A., Commandant of Cadet Battalion.

THE COLLEGES

AMOS NOYES CURRIER, LL. D., Dean of the College of Liberal Arts.
CHARLES NOBLE GREGORY, LL. D., Dean of the College of Law.
JAMES RENWICK GUTHRIE, M. D., Dean of the College of Medicine.
GEORGE ROYAL, M. D., Dean of the College of Homeopathic Medicine.
WILLIAM SUITS HOSFORD, D. D. S., Dean of the College of Dentistry.
WILBER JOHN TEETERS, PH. C., Dean of the College of Pharmacy.
LAENAS GIFFORD WELD, M. A., Dean of the Graduate College.
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FREDERICK E. BOLTON, PH. D., Director of the Summer Session.
HERBERT C. DORCAS, M. A., Secretary of the Faculties.
WALTER LAWRENCE BIERRING, M. D., Vice-Dean of the College of Medicine.

WILLIAM LE CLAIRE BYWATER, M. D., Vice-Dean of the College of Homeopathic Medicine.

THE HOSPITALS

LEE WALLACE DEAN, M. D., Director of the University Hospital.

HELEN BALCOM, Graduate Nurse, Superintendent of the University Hospital and Principal of the Training School for Nurses, College of Medicine.

WILLIAM LE CLAIRE BYWATER, M. D., Director of the Homeopathic Hospital.

ALICE C. BEATLE, Graduate Nurse, Superintendent of the Training School for Nurses, and the Homeopathic Hospital.

THE LIBRARIES AND MUSEUMS

MALCOLM GLENN WYER, B. L. S., Librarian.

MERTON LEROY FERNON, LL. B., Law Librarian.

CHARLES CLEVELAND NUTTING, M. A., Curator of the Museum of Natural History.

BOHUMIL SHIMEK, M. S., Curator of the Herbarium.

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ATHLETICS—Professors Smith, Teeters, Byers, Bryden, Bush.

AUDIT—Professors Seashore, E. A. Wilcox, Weeks, Starbuck, McClintock, Mr. McChesney.

COMBINED COURSES—Professors Currier, Loos, Royal, Hosford, Bierring, Teeters, Rockwood, Houser, Gilbert.

INTER-COLLEGIATE ORATORY AND DEBATE—Professors Gordon, Weld, Gregory, W. C. Wilcox, Ansley, Plum, Raymond, E. A. Wilcox.

LIBRARY—Regent Holbrook, the President, Professors Hayes, Dean, Rogers, Johnston, Ohle; Mr. Wyer, Secretary. (Liberal Arts to elect members).

MUSIC—Professors Seashore, Gordon, Prentiss, Raymond, Washburn.

PUBLICATIONS—Professor Macbride, the President, Professors Wilson, Becker, Gilbert, Albert, Flom, Guthe, Ford.

SECONDARY SCHOOLS; ENTRANCE EXAMINATIONS—Professors Calvin, Bolton, Shimek, Dorcas, Ensign, Higbee, Weller.

ORGANIZATION

The State University of Iowa embraces:

THE COLLEGE OF LIBERAL ARTS
THE COLLEGE OF LAW
THE COLLEGE OF MEDICINE
THE COLLEGE OF HOMEOPATHIC MEDICINE
THE COLLEGE OF DENTISTRY
THE COLLEGE OF PHARMACY
THE GRADUATE COLLEGE
THE COLLEGE OF APPLIED SCIENCE
THE SCHOOL OF MUSIC (affiliated)

The College of Liberal Arts embraces:

GROUPS OF STUDIES LEADING TO THE DEGREE OF B. A. AND
B. S., AND ALSO OF B. A. AND LL. B., OF B. S. AND M. D.,
AND OF B. S. AND D. D. S.

The School of Political and Social Science, which, includes:

A COURSE IN COMMERCE
A COURSE IN ADMINISTRATION
A COURSE IN PRACTICAL PHILANTHROPY
A COURSE IN MODERN HISTORY

A SUMMER SESSION

The College of Law embraces:

A THREE YEARS' COURSE

The College of Medicine embraces:

A FOUR YEARS' COURSE

A NURSES' TRAINING SCHOOL

The College of Homeopathic Medicine embraces:

A FOUR YEARS' COURSE

A NURSES' TRAINING SCHOOL

The College of Dentistry embraces:

A THREE YEARS' COURSE

A DENTAL ASSISTANTS' COURSE

The College of Pharmacy embraces:

A TWO YEARS' COURSE

A GRADUATE COURSE

The Graduate College embraces:

GRADUATE COURSES IN THIRTY DEPARTMENTS

The College of Applied Science embraces:

THE CIVIL ENGINEERING COURSE

THE ELECTRICAL ENGINEERING COURSE

THE MECHANICAL ENGINEERING COURSE

THE SANITARY ENGINEERING COURSE

THE MINING ENGINEERING COURSE

THE COURSE IN FORESTRY

THE COURSE IN CHEMISTRY

Special announcements giving full information concerning any of these colleges or schools will be sent to any address upon request. In writing mention the college or school in which you are particularly interested. Address,

President GEORGE E. MACLEAN,
Iowa City, Iowa.

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GEORGE EDWIN MACLEAN, B. A. Williams, 1871; M. A., 1874;
B. D. Yale, 1877; Ph. D. Leipzig, 1883; LL. D. Wil-
liams, 1895.

PRESIDENT, 1899.*

608 College St. (108 Old Capitol)

PROFESSORS

AMOS NOYES CURRIER, B. A. Dartmouth, 1856; M. A., 1859;
LL. D. Des Moines, 1893.

Professor and Head of the Department of Latin Language and
Literature, and Dean of the College of Liberal Arts, 1867.
82 E. Bloomington St. (108 Liberal Arts)

PHILO JUDSON FARNSWORTH, B. A. Vermont, 1854; M. A.,
1857; M. D., 1858; M. D. College of Physicians and
Surgeons, 1860.

Professor Emeritus of Materia Medica and Diseases of Children,
in the College of Medicine, 1869. Clinton, Iowa

†**JOHN CLINTON SHRADER**, M. D. College of Physicians and Sur-
geons, Keokuk, 1865; M. D. Long Island College Hos-
pital; M. A. Western College, 1877; LL.D., 1894.

Professor Emeritus of Obstetrics and Diseases of Women, 1869.

SAMUEL CALVIN, M. A. Cornell College, 1874; LL. D., 1904;
Ph. D. Lenox, 1888; F. G. S. A.

Professor and Head of the Department of Geology, 1874.
522 N. Clinton St. (108 Science Hall)

EMLIN McCLAIN, B. Ph. Iowa, 1871; B. A., 1872; LL. B.,
1873; M. A., 1882; LL. D., 1891; LL. D. Findlay
College, 1891.

Honorary Professor of Jurisprudence, 1881.

8 E. Bloomington St. (Old Capitol)

*Date following title indicates year of appointment to service in
the University. The names of Professors and Instructors of different
grades are arranged in groups according to seniority of appointment
to present rank. The names of Assistants are arranged alphabetically.

†Died October 30, 1906.

THOMAS HUSTON MACBRIDE, B. A. Monmouth, 1869; M. A., 1873; PH. D. Lenox, 1895.

Professor and Head of the Department of Botany, 1878.
728 E. Washington St. (206 Science Hall)

EMIL LOUIS BOERNER, PH. G. Philadelphia College of Pharmacy, 1876; PHAR. D. Iowa, 1896.

Professor Emeritus of Practical Pharmacy, 1895.

CHARLES HERBERT COGSWELL, M. D. Hahnemann College, 1866.

Professor Emeritus of Obstetrics and Diseases of Women in the College of Homeopathic Medicine, 1885. Cedar Rapids, Iowa

*GEORGE THOMAS WHITE PATRICK, B. A. Iowa, 1878; B. D., Yale, 1885; PH. D. Johns Hopkins, 1888.

Professor of Philosophy, 1887.

CHARLES BUNDY WILSON, B. A. Cornell University, 1884; M. A., 1886.

Professor and Head of the Department of German Language and Literature, 1888. 811 N. Capitol St. (101 Liberal Arts)

LAENAS GIFFORD WELD, B. S. Iowa, 1883; M. A., 1886.

Professor and Head of the Department of Mathematics; Dean of the Graduate College, 1886.

612 N. Dubuque St. (113 Liberal Arts)

CHARLES CLEVELAND NUTTING, B. A. Blackburn, 1880; M. A., 1882.

Professor and Head of the Department of Zoology, and Curator of the Museum of Natural History, 1886.

922 E. Washington St. (120 Hall of Natural Science)

JAMES RENWICK GUTHRIE, B. S. Lenox College, 1878; M. A., 1881; M. D. Iowa, 1884.

Professor of Obstetrics and Gynecology, and Dean of the College of Medicine, 1889. Dubuque, Iowa (University Hospital)

ISAAC ALTHAUS LOOS, B. A. Otterbein, 1876; M. A., 1879; B. D. Yale, 1881; LL. D. Iowa College, 1906.

Professor and Head of the Department of Political Economy and Sociology; Director of the School of Political and Social Science, 1889. 22 E. Bloomington St. (205 Liberal Arts)

SAMUEL HAYES, B. S. Michigan, 1869; M. S., 1876; LL. B. Iowa, 1891.

Professor of Law, 1891. 616 N. Dubuque St. (201 Old Capitol)

ELBERT WILLIAM ROCKWOOD, B. S. Amherst, 1884; M. A., 1901; M. D. Iowa, 1895; PH. D. Yale, 1904.

Professor and Head of the Department of Chemistry and Toxicology, 1888. 1011 Woodlawn (Chemical Laboratory)

*Absent on leave.

GEORGE ROYAL, M. D. New York Homeopathic Medicine College, 1882.

Professor of Materia Medica and Therapeutics, and Dean of the College of Homeopathic Medicine, 1892.
Des Moines, Iowa (Homeopathic Hospital)

JAMES WILLIAM DALBEY, B. S. Illinois College, 1885; M. D., 1888.

Professor Emeritus of Ophthalmology in the College of Medicine, 1889.
Cedar Rapids, Iowa

CHARLES SUMNER CHASE, A. B. Cedar Valley Seminary, 1871; B. S. Iowa State College, 1874; M. D. Rush Medical College, 1882; M. A. Iowa, 1895.

Professor of Materia Medica and Therapeutics in the College of Medicine, 1892.
Waterloo, Iowa (University Hospital)

WALTER LAWRENCE BIERRING, M. D. Iowa, 1892.

Professor of Theory and Practice and Clinical Medicine, and Vice-Dean of the College of Medicine, 1893.
17 S. Governor St. (Medical Laboratory)

WILLIAM CRAIG WILCOX, B. A. Rochester, 1888; M. A., 1891.

Professor of American History, and Head of the Department of History, 1894.
629 N. Dubuque St. (222 Liberal Arts)

FRANK THOMAS BREENE, D. D. S. Iowa, 1888; M. D., 1893..

Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinic, 1888.
105 E. Washington St. (Hall of Dentistry)

WILLIAM SUITS HOSFORD, B. A. Iowa, 1883; D. D. S., 1892.

Professor of Dental Prosthesis, and Dean of the College of Dentistry, 1893.
505 College St. (Hall of Dentistry)

GILBERT LOGAN HOUSER, B. S. Iowa, 1891; M. S., 1892; PH. D. Johns Hopkins, 1901.

Professor of Animal Biology, and Director of the Zoological Laboratories, 1892.
480 Iowa Ave. (108 Hall of Natural Science)

BENJAMIN FRANKLIN SHAMBAUGH, B. PH. Iowa, 1892; M. A. 1893; PH. D. Pennsylvania, 1895.

Professor and Head of the Department of Political Science, 1895.
219 N. Clinton St. (201 Liberal Arts)

WILLIAM ROBERT WHITEIS, B. S. Iowa, 1892; M. D., 1895; M. S., 1895.

Professor of Obstetrics in the College of Medicine, 1898.
220 S. Johnson St. (University Hospital)

LEE WALLACE DEAN, B. S. Iowa, 1894; M. S., 1896; M. D., 1896.

Professor of Ophthalmology, Otology, Rhinology, and Laryngology, and Director of the University Hospital, 1895.
8 Bloom Terrace (University Hospital)

ELMER ALMY WILCOX, B. A. Brown, 1891.

Professor of Law, and Secretary of the University Senata, 1899.
1026 E. Washington St. (104 Old Capitol)

(CLARK FISHER ANSLEY, B. A. Nebraska, 1890.

Professor and Head of the Department of English, 1899.
1041 Woodlawn (227 Liberal Arts)

LEONA ANGELINE CALL, B. A. Iowa, 1880; M. A., 1883.

Professor of Greek Language and Literature, 1885.
32 E. Bloomington St. (106 Liberal Arts)

HENRY EVARTS GORDON, B. A. Amherst, 1879; M. A., 1900.

Professor of Public Speaking, 1900.
808 N. Capitol St. (312 Liberal Arts)

**FREDERICK ELMER BOLTON, B. S. Wisconsin, 1893; M. S., 1896;
Ph. D. Clark, 1898.**

Professor and Head of the Department of Education; Director
of the Summer Session, 1900.
1019 College St. (217 Liberal Arts)

**CHARLES NOBLE GREGORY, A. B., Wisconsin, 1871; LL. B.,
1872; A. M., 1876; LL. D., 1901. .**

Professor of Law, and Dean of the College of Law, 1901.
227 N. Clinton St. (105 Old Capitol)

ERNEST ALBERT ROGERS, D. D. S. Iowa, 1892; M. D., 1904.

Professor of Regional Anatomy and Clinical Dentistry, and Su-
perintendent of Clinics, 1893.
West Side (Hall of Dentistry)

BOHUMIL SHIMEK, C. E. Iowa, 1883; M. S., 1902.

Professor of Physiological Botany, Professor of Botany in the
College of Pharmacy, and Curator of the Herbarium, 1890.
529 Brown St. (201 Science Hall)

FRANKLIN HAZEN POTTER, B. A. Colgate, 1892; M. A., 1895.

Professor of Latin, 1895. 315 S. Dodge St. (111 Liberal Arts)

**CARL EMIL SEASHORE, B. A. Gustavus Adolphus, 1891; Ph. D.
Yale, 1895.**

Professor of Psychology, and Head of Department of Philosophy
and Psychology, 1897. 204 Fairchild St. (211 Liberal Arts)

**WILBER JOHN TEETERS, B. S. Mt. Union College, 1893; M. S.,
1897; Ph. C. Michigan, 1895.**

Professor of Pharmacognosy, Director of the Pharmaceutical
Laboratory, and Dean of the College of Pharmacy, 1895.
West Side (Chemical Laboratory)

**HARRY GRANT PLUM, B. Ph. Iowa, 1894; M. A., 1896; Ph.
D. Columbia, 1906.**

Professor of European History, 1894.
222 Ronalds St. (810 Liberal Arts)

WILLIAM JEPSON, M. D. Iowa, 1886; B. S. University of the Northwest, 1890; M. D. Jefferson Medical College, 1891; M. D. Pennsylvania, 1891; L. R. C. S., and L. R. C. P., Edinburgh, and L. R. C. P. and S., Glasgow, 1897.

Professor of Surgery in the College of Medicine, 1902.
Sioux City, Iowa (University Hospital)

HENRY FREDERICK WICKHAM, M. S. Iowa, 1894.

Professor of Entomology, and Assistant Curator of the Museum of Natural History, 1894.
911 Iowa Ave. (109 Hall of Natural Science)

LAWRENCE MARSHALL BYERS, B. A. Penn College, 1890; M. A. Haverford College, 1891; LL. B. Yale, 1893.

Professor of Pleading and Practice, 1908.
480 N. Clinton St. (202 Old Capitol)

***FRANK ALONZO WILDER**, B. A. Oberlin, 1892; Ph. D. Chicago, 1902.

Professor of Petrology, Economic Geology, and Mining, 1908.

WILLIAM LE CLAIRE BYWATER, M. D. Iowa, 1897; O. et A. Chir. New York Ophthalmic, 1900.

Professor of Ophthalmology and Otology in the College of Homeopathic Medicine, Director of the Homeopathic Hospital, Vice-Dean of the College of Homeopathic Medicine, 1906.
814 Church St. (Homeopathic Hospital)

BENJAMIN RICHARD JOHNSTON, M. D. Herring College, 1893.

Professor of Theory and Practice, College of Homeopathic Medicine, 1900.
Cedar Rapids, Iowa (Homeopathic Hospital)

FREDERICK JACOB BECKER, M. D. Iowa, 1886; M. D. Hahnemann Medical College of Philadelphia, 1887.

Professor of Obstetrics and Gynecology, College of Homeopathic Medicine, 1902.
919 E. College St. (Homeopathic Hospital)

GEORGE VAN INGEN BROWN, D. D. S. Pennsylvania College of Dental Surgery, 1881; M. D. Milwaukee Medical College, 1895; C. M. Milwaukee Medical College, 1896; B. A. Northern Illinois College, 1899.

Professor of Dental Pathology and Oral Surgery, 1902.
Milwaukee, Wisconsin (Dental Hall)

CHARLES SCOTT MAGOWAN, C. E. Iowa, 1884; M. A., 1887.

Professor of Municipal and Sanitary Engineering, 1886.
804 Summit St. (Hall of Engineering)

ARTHUR GEORGE SMITH, B. Ph. Iowa, 1891; M. A., 1895.

Professor of Physics and Mechanics, 1898.
West Side (Hall of Physics)

*Absent on leave.

JOHN THOMAS MCCLINTOCK, B. A. Parsons College, 1894; M. D. Iowa, 1898.

Professor of Physiology, 1897.

230 Fairchild St. (Medical Laboratory)

BARRY GILBERT, B. A. Northwestern, 1898; LL. B., 1901.

Professor of Law, 1903.

620 N. Dubuque St. (204 Old Capitol)

HENRY ALBERT, B. S. Iowa, 1900; M. S., 1902; M. D., 1902.

Professor of Pathology and Bacteriology, 1901.

230½ E. College St. (Medical Laboratory)

HENRY JAMES PRENTISS, M. E. Stevens Institute of Technology, 1889; M. D. Bellevue Hospital Medical College, 1898.

Professor of Anatomy, and Director of the Histological Laboratory, 1904.

West Side (Hall of Anatomy)

WILLIAM GALT RAYMOND, C. E. Washington University, 1884; LL. D., 1905.

Professor of Civil Engineering, and Dean of the College of Applied Science.

606 S. Johnson St. (Hall of Engineering)

HORACE EMERSON DEEMER, LL. B. Iowa, 1879; LL. D., 1904.

Honorary Professor of Jurisprudence, 1899,

Red Oak, Iowa (Old Capitol)

GEORGE TOBIAS FLOM, B. L. Wisconsin, 1893; A. M. Vanderbilt, 1894; Ph. D. Columbia, 1900.

Professor of Scandinavian Languages and Literatures, and Acting Professor of English Philology, 1900.

308 Ronalds St. (10 Liberal Arts)

CHARLES WARREN WEEKS, B. S. Nebraska, 1898; First Lieutenant 30th Infantry, U. S. A.

Professor of Military Science and Tactics, and Commandant of the Cadet Battalion, 1905.

West Side (Armory)

ARTHUR HILLYER FORD, B. S. Wisconsin, 1895; E. E., 1896.

Professor and Head of the Department of Electrical Engineering, 1905.

215 Fairchild St. (Electrical Building)

KARL EUGEN GUTHE, Ph. D. Marburg, 1892.

Professor and Head of the Department of Physics, 1905.

707 N. Dubuque St. (Hall of Physics)

ERNEST LINWOOD OHLE, B. S. Case School of Applied Science, 1902; M. E., 1905.

Professor of Steam Engineering, and Head of Department of Mechanical Engineering, 1905.

215 Fairchild St. (Hall of Engineering)

FOREST CHESTER ENSIGN, B. Ph. Iowa, 1897; M. A., 1900.

Professor in Education, and Inspector of High Schools, 1905.
311 Ronalds St. (216 Liberal Arts)

EDWIN DILLER STARBUCK, A. B. Indiana, 1890; M. A. Harvard, 1895; Ph. D. Clark, 1897.

Professor of Philosophy, 1906.
7 E. Bloomington St. (209 Liberal Arts)

CHARLES HEALD WELLER, B. A. Yale, 1895; Ph. D. 1904.

Professor of Greek and Archæology, and Acting Head of the Department of Greek, 1906.
1024 E. Washington St. (8 Liberal Arts)

FRANK CONQUELON TITZELL, M. D. Chicago Homeopathic Medical College, 1889.

Professor of Surgery in the College of Homeopathic Medicine, 1906.
704 N. Dubuque St. (Homeopathic Hospital)

STEPHEN HAYES BUSH, B. A. Harvard, 1901; M. A., 1902.

Acting Professor in Charge of Romance Languages, 1901.
216 Fairchild St. (120 Liberal Arts)

MALCOLM GLENN WYER, B. A. Minnesota, 1899; M. L., 1901; B. L. S. New York State Library School, 1903.

Librarian, 1904. 620 E. Bowery St. (Library)

ASSISTANT PROFESSORS

FREDERICK BERNARD STURM, B. A. Michigan, 1892.

Assistant Professor of German, 1892.
1016 E. Washington St. (102 Liberal Arts)

CLARENCE WILLIS EASTMAN, B. S. Worcester Polytechnic, 1894; M. A. Leipzig, 1898; Ph. D., 1898.

Assistant Professor of German, 1898.
19 E. Bloomington St. (2 Liberal Arts)

ALBERTUS JOSEPH BURGE, B. S. Iowa, 1897; M. S., 1899; M. D., 1900.

Assistant Professor of Surgery in the College of Medicine, 1901.
22 1-2 S. Clinton St. (University Hospital)

HERBERT CLIFFORD DORCAS, B. Ph. Iowa, 1895; M. A. Columbia, 1903.

Assistant Professor of Education, University Examiner and Registrar, 1895.
429 Ronalds St. (103 Old Capitol)

CARL LEOPOLD VON ENDE, B. S. Iowa, 1893; M. S., 1894; Ph. D. Goettingen, 1899.

Assistant Professor of Chemistry, 1899.
722 E. Jefferson St. (Chemical Laboratory)

WILLIAM JAY KARSLAKE, B. S. Lafayette, 1891; M. S., 1894;
Ph. D. Johns Hopkins, 1895.

Assistant Professor of Chemistry, 1904.
928 Iowa Ave. (Chemical Laboratory)

HENRY LE DAUM, B. A. Ohio Wesleyan, 1896; M. A., 1903;
B. A. Harvard, 1897.

Assistant Professor of Romance Languages, 1905.
880 N. Linn St. (18 Liberal Arts)

FREDERICK GOODSON HIGBEE, B. S. Case School of Applied Science, 1903.

Assistant Professor and Head of the Department of Descriptive Geometry and Drawing, 1905.
225 Fairchild St. (Hall of Engineering)

FRANK EDWARD HORACK, B. Ph. Iowa, 1897; M. A. 1899; Ph. D. Pennsylvania, 1902.

Assistant Professor of Political Science, 1902.
222 E. Bloomington St. (317 Liberal Arts)

PAUL SKEELS PEIRCE, Ph. B. Cornell University, 1897; Ph. D. Yale, 1900.

Assistant Professor of History, 1902.
506 S. Governor St. (310 Liberal Arts)

FRANK DE WITT WASHBURN, A. B. Harvard, 1900.

Assistant Professor in Charge of Fine Arts, 1906.
17 E. Market St. (309 Liberal Arts)

ROBERT BRADFORD WYLIE, B. S. Upper Iowa, 1897; Ph. D. Chicago, 1904.

Assistant Professor of Botany, 1906.
125 N. Capitol St. (207 Science Hall)

BYRON JAMES LAMBERT, B. Ph. Iowa, 1900; B. S. in C. E., 1901; C. E., 1906.

Assistant Professor of Civil Engineering, 1902.
215 Fairchild St. (Hall of Engineering)

CLARENCE VAN EPPS, B. S. Iowa State College, 1894; M. D., Iowa, 1897; M. D. Pennsylvania, 1898.

Assistant Professor of Theory and Practice in the College of Medicine; Battalion Surgeon, 1904. 430 Jefferson St.

ROSCOE HENRY VOLLAND, D. D. S. Iowa, 1902; M. D., 1905.

Assistant Professor of Operative Dentistry, 1902.
903 Iowa Ave. (Hall of Dentistry)

HENRY MORROW, D. D. S. Iowa, 1897.

Assistant Professor of Prosthetic Dentistry, 1901.
617 E. College St. (Hall of Dentistry)

CHARLES LAZARUS BRYDEN, E. M. Lafayette College, 1902; B. S. in Chem., 1904.

Assistant Professor of Mining and Metallurgy, in Charge of the Department of Mining Engineering, 1904.

608 N. Dubuque St.

LECTURERS AND INSTRUCTORS

JOSEPH JASPER McCONNELL, B. A. Iowa, 1876; B. Di., 1878; M. A., 1880; LL. D. Coe College, 1904.

Lecturer on Education, 1891.

Cedar Rapids, Iowa

JOHN BLAIR KESSLER, M. D. Iowa, 1887.

Lecturer and Clinical Instructor in Dermatology in the College of Medicine, 1899.

222 E. Washington St.

LUTHER ALBERTUS BREWER, B. A. Pennsylvania College, 1883; M. A., 1886.

Lecturer on Journalism, 1900.

Cedar Rapids, Iowa

***JENNINGS PRICE CRAWFORD**, M. D. Iowa, 1893.

Lecturer on Surgical Technique, 1900.

Davenport, Iowa

THEODORE LINCOLN HAZARD, M. D. Michigan, 1883.

Lecturer on Paedology, College of Homeopathic Medicine, 1892.

114 Fairchild St. (Homeopathic Hospital)

HORACE MANN TOWNER,

Lecturer on Constitutional Law, 1904.

Corning, Iowa (Old Capitol)

CHARLES SCHAEFFER GRANT, M. D. Iowa, 1897.

Lecturer on Paediatrics in the College of Medicine, 1906.

Riverside, Iowa

SELSKAR MICHAEL GUNN, B. S. Massachusetts Institute of Technology, 1905.

Lecturer on Hygiene, 1906.

508 S. Clinton St. (Medical Laboratory)

RICHARD SUMMA, D. D. S. Iowa, 1890.

Special Lecturer in Orthodontia, in Charge of the Department of Orthodontia, 1906.

St. Louis, Missouri

MARTIN JOSEPH WADE, LL. B. Iowa, 1886.

Lecturer on Law, 1890.

115 N. Clinton St.

*Died March 24, 1907.

MAX ERNEST WITTE, M. D. Iowa, 1881.

Lecturer on Nervous Diseases, 1906.

Clarinda, Iowa

FRANK HARVEY CUTLER, B. S. Northwestern, 1877; M. D. 1882.

Lecturer on Electro-Therapeutics, 1907.

Cedar Falls, Iowa. (Medical Laboratory)

SAM BERKLEY SLOAN, B. A. Nebraska, 1899.

Instructor in English, 1899.

430 N. Clinton St. (16 Liberal Arts)

PERCIVAL HUNT, B. A. Iowa, 1900, M. A., 1904.

Instructor in English, 1900.

215 Ronalds St. (226 Liberal Arts)

ZADA MARY COOPER, PH. G. Iowa, 1897.

Instructor in Pharmacy, 1897.

124 E. Bloomington St. (Pharmaceutical Laboratory)

ANFIN EGDAHL, B. S. Wisconsin, 1900; M. D. Johns Hopkins, 1904.

Instructor in Pathology and Bacteriology, 1904.

509 E. Jefferson St. (Medical Laboratory)

FREDERICK POMEROY LORD, A. B. Dartmouth, 1898; M. D., 1903.

Demonstrator of Anatomy, and Assistant in Surgery, 1904.

21 E. Washington St. (Hall of Anatomy)

WILLIAM EVERETT SPENCE, D. D. S. Iowa, 1902.

Demonstrator in Prosthetic Dentistry and Orthodontia, 1904.

918 Iowa Ave. (Hall of Dentistry)

WALTER HENRY FOX, M. D. Iowa, 1905.

Demonstrator in Anatomy, Histology, and Embryology, 1903.

806 E. Market St. (Hall of Anatomy)

CALVIN WALDO HARNED, D. D. S. Iowa, 1903; M. D., 1906.

Demonstrator of Prosthetic Dentistry, 1903.

612 E. Market St. (Dental Hall)

EDWIN FORD PIPER, B. A. Nebraska, 1897; M. A. 1900.

Instructor in English, 1905.

506 N. Linn St. (7 Liberal Arts)

HUGO WILHELM KOEHLER, B. A. Syracuse, 1903.

Instructor in German, 1905.

514 N. Linn St. (108 Liberal Arts)

FRANK ALBERT STROMSTEN, B. S. Iowa, 1900; M. S., 1902; D. Sc. Princeton, 1905.

Instructor in Animal Biology, 1900.

113 E. Court St. (104 Science Hall)

RICHARD PHILIP BAKER, B. Sc. University of London, 1887.

Instructor in Mathematics, 1905.

818 Kirkwood Ave. (12 Liberal Arts)

FREDERICK WILLIAM BAILEY, B. S. Iowa, 1901; M. S., 1904;
M. D., 1905.

Instructor in Ophthalmology, Otology, Rhinology, and Laryngology, in the College of Medicine, 1901.

830 S. Johnson St. (University Hospital)

JOHN JOSEPH LAMBERT, B. Ph. Iowa, 1899; M. S., 1901.

Instructor in Histology and Embryology, 1898.

20 E. Jefferson St. (Medical Laboratory)

CHARLES DELOS POORE, A. C. Minnesota, 1905.

Instructor in Chemistry, 1905.

928 Iowa Ave. (Chemical Laboratory)

LEE PAUL SIEG, B. S. Iowa, 1900; M. S., 1901.

Instructor in Physics, 1905.

314 E. Church St. (Physical Laboratory)

GUSTAF ERIC WAHLIN, A. B. Bethany College, 1903; Ph. D. Yale, 1906.

Instructor in Mathematics, 1906.

911 E. Market St. (115 Liberal Arts)

JOHN VOS, D. D. S. Iowa, 1904.

529 E. Burlington St. (Dental Hall)

Demonstrator of Operative Dentistry, 1905.

LEWIS HENRY HANEY, B. A. Dartmouth, 1903; M. A., 1904;
Ph. D. Wisconsin, 1906.

Instructor in Economics, 1905.

918 Iowa Ave. (205 Liberal Arts)

FRED JAMES LONGWORTH, A. C. Minnesota, 1905.

Instructor in Chemistry, 1907.

(Chemical Laboratory)

PHILIP SHERIDAN BIEGLER, B. S. E. E. Wisconsin, 1905.

Acting Instructor in Civil and Electrical Engineering, 1906.

7 E. Bloomington St. (Electrical Building)

JAMES BRECKENRIDGE SPRAKE, B. M. E. Kentucky State College, 1905.

Acting Instructor in Descriptive Geometry and Drawing, 1906.

526 N. Linn St. (Hall of Engineering)

HUGH STRAIGHT BUFFUM, B. A. Iowa, 1901; M. A., 1902; Ph. D., 1906.

Acting Instructor in Education, 1904.

622 E. Jefferson St. (218 Liberal Arts)

JOHN FRANKLIN REILLY, A. B. Dalhousie, 1902; A. M. Harvard, 1906.

Acting Instructor in Mathematics, 1906.
515 E. Burlington St. (115 Liberal Arts)

ARCHIE GARFIELD WORTHING, B. A. Wisconsin, 1904.

Acting Instructor in Physics, 1906.
714 N. Linn St. (Physical Laboratory)

CHARLES GAMBLE SIMPSON, B. PH. Cornell College, 1895; M. A., 1902.

Acting Instructor in Mathematics, 1906.
309 Church St. (115 Liberal Arts)

VALBORG KASTMAN, B. A. Iowa, 1904.

Assistant Instructor in Physical Training, 1902.
111 E. Bloomington St. (5a Liberal Arts)

MARY GROVE CHAWNER, A. B. Penn College, 1896; M. A. Iowa, 1904.

Assistant Instructor in English, 1902.
32 E. Bloomington St. (15 Liberal Arts)

RUDOLPH ERNST KLEINSORGE, B. S. Iowa, 1904.

Assistant Instructor in Physiology, 1903.
318 Ronalds St. (Medical Laboratory)

HERTHA LOUISE VOSS, B. PH. Iowa, 1904.

Assistant Instructor in French, 1904.
615 N. Dubuque St. (6 Liberal Arts)

CLARENCE WYCLIFFE WASSAM, B. PH. Iowa, 1903; M. A., 1904.

Assistant Instructor in Political Economy and Sociology, 1903.
220 N. Dubuque St. (205 Liberal Arts)

ROE EUGENE REMINGTON, B. A. Colorado, 1905.

Assistant Instructor in Chemistry, 1905.
923 Iowa Ave. (Chemical Laboratory)

ADIN NOYES BROWN, PH. G. Iowa, 1903.

Assistant Instructor in Chemistry, 1905.
Cor. College and Summit Sts. (Chemical Laboratory)

GEORGE CLARK PELTON, D. D. S. Iowa, 1904.

Assistant Demonstrator of Regional Anatomy and Clinical Dentistry, 1906.
227 N. Dubuque St. (Hall of Dentistry)

ARTHUR DANIEL WOODS, M. D. Iowa, 1906.

Assistant Demonstrator in Anatomy, Histology, and Embryology, 1908.
409 E. Jefferson St.

ARTHUR DAVISON FICKE, B. A. Harvard, 1904.

Assistant Instructor in English, 1906.
410 Iowa Ave. (118 Liberal Arts)

ALICE RIGBY, B. PH. Cornell College, 1902; M. A. Iowa, 1906.

Assistant Instructor in English, 1906.
908 Iowa Ave. (15 Liberal Arts)

DANIEL STARCH, B. A. Charles City College, 1903; M. A. Iowa, 1904; Ph. D., 1906.

Assistant Instructor in Philosophy, 1908.

208 Fairchild St. (214 Liberal Arts)

MARK SEAVEY CATLIN, B. PH. Chicago, 1905.

Assistant Instructor in charge of Athletics, 1906.

414 Brown St. (Athletic Pavillion)

PAUL FREDERICK EDINGER, B. A. Iowa, 1905.

Assistant Instructor in Geology, 1905.

(106 Science Hall)

EDWARD ACOMB RULE, B. S. Iowa, 1904.

Assistant Instructor in Charge of Gymnastics, 1906.

400 N. Clinton St. (Athletic Pavillion)

RALPH EUGENE ROOT, B. S. Morningside College, 1905.

Assistant Instructor in Mathematics, 1906.

401 S. Governor St. (115 Liberal Arts)

JESSIE MARIE JEPSON, B. A. Carleton College, 1903; Teacher's Diploma, Boston School of Expression, 1906.

Assistant Instructor in Public Speaking, 1906.

122 N. Capitol St. (818 Liberal Arts)

EMIL LEONARD LUNDGREN, B. S. C. E. Armour Institute, 1904.

Assistant Instructor in Civil Engineering, 1907.

942 Iowa Ave. (Hall of Engineering)

GEORGE EARL REED, D. D. S. Iowa, 1901.

Assistant Demonstrator of Operative Dentistry, 1907.

(Hall of Dentistry)

SPECIAL LECTURERS IN THE SUMMER SESSION

ERMINE C. CASE, Ph. D. Chicago, 1897.

Professor of Geology, State Normal School, Milwaukee, Wisconsin. Geology, Summer Session, 1907.

JOHN LEWIS GILLIN, B. A. Iowa College, 1895; A. M. Columbia, 1903; B. D. Union Theological, 1904; Ph. D. Columbia, 1906.

President of Ashland College, Ashland, O. Sociology in Summer Session, 1907. (205 Liberal Arts)

WESLEY NEWTON CLIFFORD, B. S. Des Moines, 1898.

Superintendent of Schools, Council Bluffs, Iowa. Education in the Summer Session, 1906, 1907.

CALVIN NOYES KENDALL, B. A. Hamilton College, 1882; M. A. Yale, 1900.

Superintendent of Schools, Indianapolis, Ind. Education in the Summer Session, 1907.

WILLIAM A. WILLIS, B. A. Beloit College, 1862; M. A., 1865.

Principal of Iowa City Academy. Professional Reviews, Summer Session, 1907.

WILLIAM PETRIE CHRISTY,

Supervisor of Music, Public Schools, Iowa City. Music in the Summer Session, 1907. 335 S. Lucas St.

AGNES ELIZABETH OTTO, B. A. Iowa, 1892.

Supervisor of Drawing, Public Schools, Iowa City. Drawing in the Summer Session, 1907.

ASSISTANTS IN INSTRUCTION AND ADMINISTRATION

THOMAS STANLEY ARMSTRONG, M. E. Minnesota, 1906.

Assistant in the Engineering Shops, 1906.
228 N. Clinton St. (Engineering Shops)

WILLIAM RICHARD ARTHUR.

Undergraduate Assistant in Dermatology, 1907.
309 S. Dubuque St.

HELEN BALCOM, Graduate Nurse.

Superintendent of University Hospital, and Principal of Nurses' Training School, 1906. (University Hospital)

EDWARD CECIL BARRETT, B. A. Iowa, 1906.

Assistant Secretary of the Board of Regents, 1902.
410 Iowa Av. (101 Old Capitol)

FRED GEORGE BAENDER.

Superintendent of Engineering Shops, 1905.
229 Iowa Av. (Engineering Shops)

HELEN BASCHNAGEL.

Clerk in the College of Dentistry, 1896.
424 E. Market St. (Hall of Dentistry)

ALICE CATHERINE BEATLE, Graduate Nurse.

Superintendent of the Homeopathic Hospital and Principal of the Nurses' Training School, 1905. (Homeopathic Hospital)

WILLIAM FRED BOILER, M. D. Iowa, 1906.

Resident Physician, University Hospital, 1906.
(University Hospital)

HARRY EDWARD BURTON, B. A. Iowa 1901; M. S., 1903..

Assistant in Astronomy, 1901.

JOSEPH MAXWELL CADWALLADER.

Senior Undergraduate Demonstrator in Anatomy, Histology, and Embryology, 1904. 224 S. Linu St.

JOHN WILLIAM CARVILLE.

Attendant in Geology, 1892. 610 E. Jefferson St.

LUCY MARY CAVANAGH, B. S. Iowa, 1896.

Assistant in Botany, 1902.
711 Church St. (Natural Science Hall)

ALICE BRADSTREET CHASE.

Executive Clerk, 1895. 24 N. Clinton St. (107 Old Capitol)

LOLA CLARK-MIGHELL, M. D.

Consulting Physician, Physical Training for Women, 1906.
218 1-2 E. Washington St.

CHARLES HERBERT COGSWELL, JR., B. S. Iowa, 1901; M. D., 1902.

Assistant in Surgery, Homeopathic Hospital, 1906.
Cedar Rapids, Iowa

HENRY GIVIN COX,

Instructor in Violin and Orchestral Instruments, and Conductor
of University Band and Orchestra. Burlington Terrace

ARCHIE WEST CRARY, B. S. Cornell College, 1897; LL. B. Iowa, 1904; M. D., 1906.

Clinical Assistant in Ophthalmology, Otology, Rhinology, and
Laryngology, 1906.
308 S. Dubuque St. (University Hospital)

IRA NELSON CROW..

Assistant in Histology and Embryology, 1905.

HOMER RAY DILL.

Taxidermist, 1906.
380 S. Johnson St. (Hall of Natural Science)

FRED COLLINS DRAKE, B. PH. Iowa, 1901; LL. B., 1903.

Secretary to the President and University Editor, 1903.

EVIE JAMES EDWARDS,

Undergraduate Assistant in Physics, 1906.

GILBERT HORACE ELLSWORTH.

Superintendent of Construction, Maintenance, Grounds, and Build-
ings, 1902. 1035 E. Burlington St. (101 Old Capitol)

IDA WINSLOWE FELKNER.

Instructor in Pianoforte and Musical Interpretation, University
School of Music (affiliated).
810 Kirkwood Av. (School of Music)

MERTON LEROY FERSON, B. PH. Iowa, 1900; LL. B., 1901; M. A., 1905.

Law Librarian, and Assistant in Political Science, 1902.
223 E. Bloomington St. (Law Library)

HELEN COX GILCHRIST.

Assistant to the Registrar, 1906.
615 N. Dubuque St. (108 Old Capitol)

CARL WILLIAM GRAY,

Attendant in Chemistry.

WILLIAM McMICKEN HANCHETT, A. B. Harvard, 1903.

Assistant in Pathology and Bacteriology, 1906.
311 E. College St. (Medical Laboratory)

PAUL JOHN HANZLIK, Ph. G. Iowa, 1902.

Attendant in Chemistry, 1905.

BERTHA ORR HEMSWORTH.

Assistant in the Women's Gymnasium, 1906.

HARRIET EMMA HOWE, B. L. S. Illinois State Library School, 1902.

Cataloguer, 1906.

222 Ronalds St. (Library)

LEORA JOHNSON, M. D. Iowa, 1890.

Clinical Assistant to the Chair of Surgery, College of Homeopathic Medicine, 1890. 22 N. Clinton St. (Homeopathic Hospital)

OTTO FREDERIC KAMPMEIER.

Undergraduate Assistant in Animal Biology, 1906.

1126 E. Washington St. (Natural Science Hall)

RALPH GLENN KLINE.

Undergraduate Assistant in Zoological Museum, 1906.

2 River Terrace (Natural Science Hall)

CHARLES SCHUTZ KRAUSE, B. S. Iowa, 1902; M. S., 1904; M. D., 1904.

Assistant in Gynecology, 1901.

Cedar Rapids, Iowa (University Hospital)

CAROLINE VALERIA LANGWORTHY, B. L. S. Illinois State Library School, 1903.

Reference Assistant, 1905.

125 N. Clinton St. (Library)

ISAAC WELLMAN LEIGHTON.

Undergraduate Assistant in Histology and Embryology, 1907.

ROBERT ELMER LONG.

Undergraduate Assistant in Library, 1906.

9 S. Linn St.

EDNA LYMAN.

Instructor in Library Work with Children in Summer Session, 1906.

HERVEY FULTON MASSON.

Interne in the Homeopathic Hospital, 1906.

(Homeopathic Hospital)

WILLIAM JUDD MCCHESENEY.

Secretary of the Board of Regents, 1902.

12 E. Bloomington St. (101 Old Capitol)

JAMES CHARLES MCGREGOR, M. D. Iowa, 1906.

Assistant Demonstrator in Pharmacology, 1905.

109 E. Burlington St. (Medical Laboratory)

WILLIAM GEORGE MCKAY, B. S. Iowa State College, 1898; M. S., 1906.

Assistant in Pathology and Bacteriology, 1906.

611 S. Clinton St.

DIEDRICH JANSSEN MEENTS, B. S. Steinman College, 1903.

Senior Assistant in Pathology and Bacteriology, 1904.
304 S. Clinton St. (Medical Laboratory)

WALTER MITCHELL,

Assistant in French, 1906.

JAMES MOORHEAD, M. D. Iowa, 1893.

Assistant in Theory and Practice, College of Homeopathic Medicine, 1908.
Marion, Iowa (Homeopathic Hospital)

WILLIAM JOHN MORGAN, B. S. Morningside College, 1905.

Storekeeper in Chemistry, 1905.
935 Iowa Av. (Chemical Laboratory)

GEORGE MOSBY.

Interne in the Homeopathic Hospital, 1906.
(Homeopathic Hospital)

GEORGE AUERBACH NEUSTADT.

Undergraduate Assistant in Animal Biology, 1906.
128 N. Clinton St.

JOHN THOMAS PADGHAM.

Undergraduate Assistant in Physiology, 1905.
308 S. Johnson St. (Medical Laboratory)

EFFIE MAE PROFFITT.

Director of the University School of Music (affiliated), 1906.
(School of Music)

FRANK HALL RANDALL, B. A. Iowa, 1902.

Substitute in History, and Instructor in History in Summer Session, 1907.
128 E. Bloomington St. (310 Liberal Arts)

ADELE AGNES RIES.

Assistant Clerk, College of Dentistry, 1906.
120 N. Dubuque St. (Hall of Dentistry)

ALEXANDER CUMMINGS ROBBIE, B. A. Coe College, 1906.

Assistant in Philosophy in Summer Session, 1907.

JENNIE ELLEN ROBERTS, B. PH. Iowa, 1905.

Assistant Cataloguer, 1906. 420 S. Clinton St. (Library)

JOHN GEORGE ROHRIG.

Undergraduate Assistant in Chemistry, 1906.
1122 E. Washington St. (Chemical Laboratory)

HARRY DICK BUCHANAN SHAW.

Assistant in Shopwork, 1906.
117 E. Burlington St. (Engineering Shop)

ANNA MARIE SLATER.

Matron of the University Hospital, 1905.
(University Hospital)

FREDERICK ALBERT SLYFIELD.

Attendant in Pathology and Bacteriology, 1906.
120 E. Davenport St. (Medical Laboratory)

EDGAR FRANCIS SMITH.

Junior Undergraduate Demonstrator of Anatomy, Histology, and Embryology, 1905.
6 Bloom Terrace

FRANKLIN ORION SMITH, B. A. Iowa, 1906.

Instructor in Professional Reviews, Summer Session, 1907.

ANNA DILLER STARBUCK.

Instructor in Pianoforte, Organ, Harmony, Theory, and History of Music in the University School of Music (affiliated), 1906.
7 E. Bloomington St. (School of Music)

JOANNA GLEED STRANGE, B. A. Iowa, 1906.

Assistant in Library, 1901. 714 N. Linn St. (Library)

LOVELL SWISHER.

Treasurer of the University. 419 Summit St.

ARTHUR LAWRIE TATUM, B. A. Penn College, 1905.

Assistant in Chemistry in Summer Session, 1907.

ALICE S. TYLER, Graduate of Illinois State Library School.

Director of Library Training School, 1900.

FREDERICK WILLIAM VALKENAAR.

222 N. Linn St. (Medical Laboratory)
Senior Assistant in Clinical Microscopy, 1905.

MABLE MONTGOMERY VOLLAND, B. A. Iowa, 1906.

Acting Dean of Women, and Assistant in English, 1906.
903 Iowa Av. (117 Liberal Arts)

EVERETT CHAPMAN WARD.

24 E. Burlington St. (Medical Laboratory)
Undergraduate Assistant in Histology and Embryology, 1905.

IRENE WARREN, Graduate of Illinois State Library School.

Instructor in Classification in Library Training School, 1906.

ELLA BETTS WATERBURY, B. A. Iowa, 1905.

Assistant Registrar, 1905.

NELSON DREW WELLS. B. PH. Iowa Wesleyan, 1901.

Tutor in Medical Latin, 1905. 128 E. Bloomington St.

PERRY WESSEL, M. D. Iowa, 1906.

Resident Physician, University Hospital, 1906.

GENERAL INFORMATION

ORGANIZATION AND INCOME

ORGANIZATION

The State University of Iowa is an integral part of the public school system of the state. As required by law, the work of the University is based upon the preparation afforded by the duly accredited high schools of the state, whose students are admitted to the undergraduate and professional courses upon presentation of the proper certificates. A sense of this vital connection with the public schools determines, in a large measure, the requirements for admission to the University, its spirit, and its courses of study. The state, through the University, undertakes to furnish instruction in the various branches requisite for a liberal education in the liberal arts, law, medicine, dentistry, pharmacy, nursing, and, in applied science, the various branches of engineering. It also aims to encourage research work in all departments, to produce creative scholars, and thus to do its part in the enlargement of the domain of knowledge. Thus it is the general policy of the institution to foster the higher educational interests of the state, broadly and generously interpreted.

The control of the University is intrusted to a Board of Regents, consisting of the Governor of Iowa and the Superintendent of Public Instruction *ex officio*, and of one member elected by the General Assembly from each of the eleven congressional districts.

INCOME OF THE UNIVERSITY

The University enjoys the proceeds of the invested funds and lands originally given by the United States. Recent General Assemblies have enlarged the general support funds of the University by permanent appropriations. The University enjoys the proceeds from a one-fifth of a mill levy for buildings alone. The liberality of these assemblies, makes it possible for the University, for the first time in its history, to anticipate reasonably adequate support with modern buildings and equipment.

Plans have been made to keep and beautify the historic campus of the Old Capitol as the center for the enlarged grounds which are to front the river and to be connected with the athletic field on the west, and through the newly acquired medical quadrangle, with the old park or hospital campus on the east. With fifty acres in the heart of one of the most picturesque and sanitary small cities in the United States, with possibilities of park extension across the river, the opportunities for landscape architecture equal those of the most favored seats of learning. The Iowa River has been dammed just below the University grounds, making a beautiful water-front and giving facilities for adding all forms of aquatic sports to the athletics of the University.

The University at present occupies nearly thirty buildings, situated near the center of Iowa City. The majority of these buildings are new and their number is increasing constantly in harmony with the rapid growth of the institution. The general plan of the campus has been intrusted to capable architects and landscape gardeners and a systematic arrangement of buildings and grounds is being followed.

The principal buildings are mentioned below in the order of their erection or occupancy by the University.

The OLD CAPITOL, in which are located the administrative offices and the College of Law. This building is the old State House, the corner stone of which was laid July 4, 1840.

The ENGINEERING SHOPS at present occupy temporary buildings which have been erected upon the foundations of Old South Hall and the former Medical Hall. The two buildings have been connected, making large and commodious quarters.

The HALL OF PHYSICS is occupied exclusively by the laboratories and lecture rooms of the department of physics.

The **SCHOOL OF MUSIC**, affiliated with the University, occupies at present a commodious and attractively furnished building on the Medical Quadrangle near Unity Hall.

The **ELECTRICAL BUILDING**, in the rear of Old Capitol, is occupied by the department of electrical engineering.

In **NATURAL SCIENCE HALL** are located the departments of biological science of the College of Liberal Arts, and also the Museum of Natural History. The building will be devoted wholly to the use of the departments of botany and geology, as soon as the new Hall of Natural Science is ready for occupancy.

The **HALL OF CHEMISTRY AND PHARMACY** contains the laboratories and lecture rooms of the several departments of chemistry and pharmacy.

CLOSE HALL, the home of the Young Men's and Young Women's Christian Associations of the University, also contains the halls of six of the forensic societies; the entire lower floor is occupied by the women's gymnasium.

The **HALL OF DENTISTRY** is occupied exclusively by the College of Dentistry, and is furnished with the most modern equipment, electrical and otherwise.

The **UNIVERSITY HOSPITAL OF THE COLLEGE OF HOMEOPATHIC MEDICINE** affords accommodations for fifty-four patients, and contains a large clinical amphitheater, dispensary, administrative office, and the library of the College of Homeopathic Medicine.

The **UNIVERSITY HOSPITAL OF THE COLLEGE OF MEDICINE** is provided with a large amphitheater, numerous operating rooms and offices, a dispensary, and accommodations for seventy-five patients.

A new fire-proof wing is now being added to this building. This will cost, when equipped, \$75,000, and will give the hospital the capacity of one hundred and thirty-five beds.

Two **NURSES' HOMES** are situated conveniently near to these hospitals.

Three small buildings furnish accommodation for the standard weights and measures of the state, a student's astronomical observatory, and a carpenter shop.

The **HALL OF LIBERAL ARTS**, a handsome fire-proof building of Bedford stone, 120 by 260 feet on the ground, contains

ninety-two rooms arranged for the respective departments of letters with office, seminary, departmental library, and lecture rooms *en suite*. There are also an attractive drawing and rest room for women, psychological laboratories and a general lecture room. The library of the State Historical Society and the general University library are temporarily lodged in this building. The style of the building harmonizes with the Old Capitol.

The HALL OF ANATOMY is the first building completed in the new Medical Quadrangle. It contains dissecting rooms with the most modern accommodations for twenty tables, an amphitheater with seating capacity of two hundred and twenty-five persons, offices, reading rooms, and a preserving room. It is a hexagonal, fire-proof building of Bedford stone, with granite foundations. The interior finish is designed to make it aseptic.

The GENERAL MEDICAL LABORATORIES occupy the second building in the new Medical Quadrangle and contains the general and clinical laboratories of bacteriology, pathology, histology, physiology, and pharmacology. It is constructed in the same manner as its companion building just described.

A large ARMORY AND ATHLETIC PAVILION is available for the use of the men of the University. The building is 84 by 162 feet in dimensions and three stories in height. In addition to thorough equipment in the way of gymnasial apparatus the building contains a twelve-lap, concave, canvas-lined running track. The building is situated just outside the athletic field which contains a football gridiron, a baseball diamond and a two-fifth mile cinder track.

The new HALL OF NATURAL SCIENCE, a fireproof Bedford stone building, the counterpart of the Hall of Liberal Arts, is now nearing completion. This building ultimately will be given wholly to the museum and departments of natural history, but will temporarily house the general library and furnish an assembly hall to seat 1,800 people.

The HALL OF ENGINEERING, which constitutes a part of the north wing of the new Quadrangle of the College of Applied Science, is 70 by 125 feet in area, and three stories and a basement in height. It provides lecture, recitation, drawing

and study rooms, with separate study-space for each student, together with an engineering materials laboratory.

UNITY HALL is a large brick building containing an auditorium for lectures, recitals, and the like, and smaller rooms for class work. Part of the building is devoted temporarily to the use of the College of Law.

The CENTRAL HEATING AND POWER PLANT furnishes heat for the buildings of the University, and is supplied with dynamos for use as a reserve light and power plant in case of necessity.

The STEAM ENGINEERING LABORATORY is designed particularly for use of students of steam engineering, but it will be equipped also for other experimentation, such as for gas-making, ice-making, etc.

The HYDRO-ELECTRIC POWER PLANT, located at the end of the dam across the Iowa River, is fitted with turbine wheels and dynamos and supplies light and power for the buildings of the University. The plant is also available for laboratory work.

The PLANT HOUSE, which is being completed this season in connection with Natural Science Hall, provides for growth and preservation of botanical materials and supplies a laboratory for the study of plant-physiology.

A PRESIDENT'S HOUSE is also building at the head of Clinton Street, and will be completed this year.

Besides these the following buildings are fully designed and are beginning to be built this year:

The HALL OF THE COLLEGE OF LAW.

An extension of the COLLEGE OF APPLIED SCIENCE.

A new and fully equipped HALL OF PHYSICS.

The Board of Regents has also approved the plan and requested appropriation of the Legislature for a WOMEN'S HALL. If the request is granted, this building also will begin at once.

Some minor buildings have not been mentioned.

LIBRARIES

The general UNIVERSITY LIBRARY, a series of valuable departmental libraries, also the State Historical Society library, which is kept in conjunction with the general library, the library of the College of Law, and the libraries of the other professional colleges, as well as the Public Library of Iowa City are all accessible to students. This makes available about 125,000 well selected volumes. An extended list of current periodicals is provided also.

The UNIVERSITY LIBRARY contains about 65,000 volumes, not including a large number of pamphlets. It embraces the libraries of the Colleges of Liberal Arts, Law, Medicine, Homeopathic Medicine, Dentistry, Pharmacy, and Applied Science. These separate libraries are shelved in the several buildings, where they are accessible to any one who desires to use them.

The library includes, among other volumes:

1. The TALBOT LIBRARY, a large and valuable collection of works pertaining chiefly to natural history, explorations, voyages, and travels.
2. The AMERICANA LIBRARY, of several hundred volumes, many rare and of considerable value; the greater number of them were purchased with funds subscribed by the alumni of the University; others were contributed by friends.
3. A fine collection of *philological periodicals* given by the German citizens of the state.
4. The books contained in the *official list of library books for school districts of Iowa*, recommended by the state board of educational examiners, and maintained for the use of the teachers of the state.

This library being a depository for the Government documents, the larger part of the "sheep-bound reserve" set of Government publications are located here, and the set is being completed as fast as possible.

The University receives by purchase and exchange more than 600 periodicals and scientific society transactions.

Members of the faculties and other officers of the University may draw books from the library. To all other persons it is a reference library, and as such is open to any one.

The GENERAL READING ROOM occupies the south end of the third floor of the Hall of Liberal Arts, and is open daily (except Sundays and legal holidays) from 8:00 A. M. to 10 P. M.

The LIBRARY OF THE COLLEGE OF LAW, numbering about 14,000 volumes, occupies the former Senate chamber on the second floor of the Old Capitol. It contains a full series of the reports of the Supreme Court of the United States and of the courts of last resort of forty-five states, including all the series of reports most frequently referred to; also the American Decisions; American Reports; American State Reports; Lawyer's Reports Annotated; English Ruling Cases; a collection of English Reports, which, with additions lately made, is almost complete; full series of the Reporter System; and a large collection of the latest and best text-books in law.

A valuable collection of 1,200 volumes relating principally to the civil law and the history of the common law, presented to the University by Mrs. Hammond, widow of William G. Hammond, LL. D., the first Chancellor of the College of Law, is kept in the law library as a separate collection for the use of the students of the college and others interested in such subjects. These books are kept in special cases, under the charge of the law librarian, and are accessible upon request.

The READING ROOM of the law library is open from 8:00 A. M. to 5:30 P. M., and from 7:00 to 9:00 P. M. daily (except Sundays).

The LIBRARY OF THE COLLEGE OF MEDICINE comprises the latest editions of standard works, as well as many volumes of periodicals relating to the various branches of medical science.

The LIBRARY OF THE COLLEGE OF HOMEOPATHIC MEDICINE is valuable professionally; it is located in the homeopathic hospital.

The DEPARTMENTAL LIBRARIES are supplied with ample material for work of advanced students. By regular appropriations these are being made constantly more useful.

The LIBRARY OF THE STATE HISTORICAL SOCIETY OF IOWA is located in the Hall of Liberal Arts of the University, and

contains about 40,000 volumes, open for the use of University students. This collection of historical documents is growing rapidly and is invaluable to the student of Iowa history. The Society issues its own publications regularly and has on its exchange-list the publications of similar societies in the United States, as well as a large number of foreign publications and the publications of leading Universities, both American and foreign. The society publishes quarterly "The Iowa Journal of History and Politics," which is devoted to critical studies of the history and politics of Iowa.

LABORATORIES

BOTANICAL LABORATORY

The laboratory is located on the second floor of Natural Science Hall, and is in direct communication with the herbarium room. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate thirty students at one time. It is equipped with new microscopes and with all the facilities for advanced histological work.

1. Connected with the main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special microscopes, a photomicrographic camera, and apparatus for investigation in vegetable physiology.

2. A fine stereopticon with hundreds of slides furnishes the material basis for general illustration, and for special illustrated lectures. The laboratories are well lighted and in every way adapted to satisfactory work.

3. The herbarium affords a very large amount of material suitably preserved for various lines of investigation in histology, embryology, as well as in all departments of taxonomic research.

4. A fully equipped dark-room is at the disposal of students whose work in the department requires photographic illustration.

5. All the more important works of reference in botanical science are found as a working library in the laboratory.

6. The new Plant House and Physiological Laboratory is mentioned under BUILDINGS.

CHEMICAL LABORATORIES

A three-story brick building, 105 by 150 feet on each floor, is devoted entirely to the uses of the departments of chemistry

and pharmacy. The lecture-hall is built in the form of a amphitheater, and will accommodate nearly two hundred students, each of whom can see the lecture-table and any experiment that may be performed there. There is also a special lecture-room for students in pharmacy. The building contains a general laboratory 100 feet in length by 27 feet in minimum breadth for the use of students in the Colleges of Liberal Arts and Applied Science, and two other laboratories nearly as large for those in the Colleges of Medicine and Pharmacy; also, a large laboratory for advanced students, a laboratory for metallurgy and assaying, a laboratory of physical chemistry, and several private laboratories which may be fitted up for various special lines of research.

Reading rooms, containing the libraries of general and pharmaceutical chemistry, spectroscopy and balance rooms, engine and dynamo rooms, dark rooms for photography, store rooms, and offices are also ready for use.

A storage battery and dynamo in connection with the gas-engine furnish electricity to the various laboratories for electrolysis and other uses.

ENGINEERING LABORATORIES

The engineering laboratories at present include a hydraulic laboratory, a laboratory for testing materials of construction, an electrical laboratory, and a steam laboratory. In addition to these, the light, heat, and power plant of the University is available for experimental purposes in the courses in steam and electrical engineering, the heating and ventilating systems for the course in heating and ventilating, and the new hydro-electrical power plant for work in testing hydraulic and electric machinery. The canal to be built in connection with the new dam now completed will furnish opportunity for extensive experiments in the flow of water over weirs and in channels.

There is a large equipment of modern field instruments for surveying. This equipment is from the best makers, and includes compasses, levels, transits, plane table, solar instruments, and all minor tools for land, topographical, hydrographical, and railroad surveying.

HYDRAULIC LABORATORY

The hydraulic laboratory, which is eventually to be in the southwest corner of the new engineering building, is at present located in the north end of the basement of the Old South Hall. Its equipment consists of a Worthington duplex fire pump of 500 gallons per minute capacity, tanks, standard orifices, weirs, hook-gage, water-meters of various forms, and a Price acoustic current meter.

MATERIALS-TESTING LABORATORY

The laboratory for testing the physical properties of materials is temporarily housed in the basement of the old Medical Building, but will be removed to the new Hall of Engineering the coming year. It is equipped with an autographic torsion machine, a Riehle automatic standard testing machine of 100,000 pounds capacity, a standard abrasion cylinder for testing paving materials, a Fairbanks automatic briquette testing machine of 1,000 pounds capacity, an Olsen briquette machine of 2,000 pounds capacity, and a full line of tools for preparing wood, metal, cement, or concrete specimens.

ELECTRICAL LABORATORY

The electrical laboratory is in the electrical building, but ultimately will be removed to commodious quarters in the new Hall of Engineering. It is supplied with both direct and alternating current from the University light and power plant and the new hydro-electric plant. It includes in its equipment examples of the various classes of electrical machines in common use, with the necessary complement of instruments for testing.

STEAM LABORATORY

A new steam laboratory has been erected during the year 1906-07, and will be equipped during the summer of 1907 with a large number of machines, including a Corliss engine, steam-turbine, gas engine, refrigerating plant, compressors, power

brakes, dynamometers, etc., for experimental work in mechanical engineering. It will be perhaps the most complete laboratory of its kind west of the Mississippi river.

MINING ENGINEERING LABORATORY

For work in mining engineering the assay laboratories of the department of chemistry and the mineralogical laboratory of the department of geology, are available. The department of mining owns a complete concentrating mill, built to one-quarter size and operated by motor power, and numerous mining implements.

HYDRO-ELECTRIC PLANT

Through the liberality of Mr. and Mrs. Euclid Sanders, of Iowa City, the water power known as the Terrill Mill Dam, or mill privilege, on the Iowa River, about a mile above the University grounds, has been granted to the University, to be used primarily in the development of the college of applied science. Through the public-spirited generosity of citizens of Iowa City the necessary intervening rights have been secured to permit the building of a dam a mile below the Terrill site, and just below the University grounds, bringing it within easy access of the power plants and laboratories, securing a fine water front to the west of the campus, and materially increasing the available power.

A new dam and power house have been built, giving a maximum head of about 9 feet, and from 150 to 300 horse power, according to the stage of the river. The dam was built by contract, but the difficult part of the power house, the foundation below water, was built by students of the University under the direction of one of its professors.

The power plant consists of four 51-inch McCormick turbines, governed by two Replogle mechanical governors, and two Crocker-Wheeler generators of 50 K. W. and 100 K. W., respectively. A 5-ton traveling crane serves to handle the heavy machinery. A two phase alternating current at 2,300 volts is generated for use by the University in lighting and driving machinery, and for experimental purposes.

This is one of the few hydro-electric plants possessed by an educational institution, and operated on a commercial scale.

SHOPS

The equipment for shopwork is modern, excellent, and ample, and will be increased as occasion demands. The pattern shop contains the necessary benches, lathes, circular and band saws, and small tools for complete courses in woodworking and pattern making.

The forging shop has ten modern power-blown forges, with necessary tool-boxes and tools. The machine shops, the usual complement of lathes, planers, shapers, drill press, and grinders, with many special attachments designed and built in the shops, and a fine new milling machine.

Students in pattern-making make patterns for machines needed in the shops, the castings are made in neighboring foundries, and are returned to the shops where they are machined and assembled by the students. The work is thus of the most practical character for the student, and done with the greatest economy for the state.

GEOLOGICAL, PETROLOGICAL, AND PALEONTOLOGICAL LABORATORIES

The equipment of the department embraces:

1. a. An extensive collection of American and European fossils, illustrating the history and development of life from the earliest geologic ages to the present time.
- b. Several hundred mineral specimens selected and arranged to illustrate the economic geological resources of the United States, including:
 - (1). The metalliferous products, such as the various ores of gold, silver, copper, iron, etc., and their modes of occurrence.
 - (2). The non-metalliferous products, such as coal, building materials, gypsum, etc.

- c. A collection of rock-making minerals.
- d. A collection of rock specimens, illustrating the mineralogical composition, structure, mode of occurrence, and classification of rocks.
- e. A large number of sections of rocks, minerals, and fossils for microscopic study in connection with the work in petrology and paleontology.

2. Globes; physical maps of the continents and oceans; a series of topographical and geological maps and charts, published by the United States Geological Survey, the various state surveys, and the surveys of foreign countries, geological and physiographical models, and relief maps; more than two thousand lantern slides, covering every phase of geology which can be illustrated in this way; several hundred photographs illustrating physiographic and geologic phenomena.

3. A lithological lathe for making microscopic and other sections of rocks, minerals, and fossils.

4. A number of petrographical microscopes of the most approved design; two Joly balances for specific gravity determinations; Mohs's scale of hardness, etc.

5. A complete photographic outfit, including a large photomicrographic camera.

6. A large series of negatives from which the students make prints to illustrate their permanent notebooks.

7. Equipment for determinative mineralogy.

8. A collection of crystal models, natural crystals, and crystal sections to illustrate the work of crystallography.

9. The library of the department contains more than 1,000 bound volumes and about 1,000 catalogued pamphlets. In addition to the standard works on geology and related subjects, the library contains the publications of the United States Geological Survey, the reports of the various state surveys, and a number of geological publications of foreign governments.

The surrounding neighborhood affords many instructive examples of phenomena which are interesting to the student of geology. At the same time it offers unexcelled opportunities for field-work in mapping, making geological sections, tracing strata from one exposure to another, and making paleontological collections. The Pleistocene deposits are of especial interest.

The boulders of the drift afford an opportunity for a study of several types of crystalline rocks. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for a number of years.

MEDICAL LABORATORIES

The laboratories of the Colleges of Medicine are located in the new laboratory building and are provided with the most modern and adequate equipment.

The physiological laboratory occupies most of the first floor of the building. The main room is well filled with tables, —each table being supplied with gas and electrical apparatus, revolving drums, muscle levers, and other materials necessary for practical physiology. Special rooms are provided for students doing research or advanced work.

The histology and embryology laboratories are upon the second floor of the new hall and the rooms are arranged with special reference to the requirements of microscopical work. Besides the general laboratories for general class work a special laboratory is well furnished and equipped for advance research work of all kinds.

The pathology and bacteriology laboratories occupy the rooms on the third floor of this building and are provided with rooms and equipment adequate for their needs. The rooms are all well lighted and furnished with microscopes and other apparatus of the most modern types. By reason of special association with the pathological institutes of Vienna, Leipzig, and Munich, the department has come into possession of a most complete and varied collection of diseased tissues and organs for the study of general and special pathological histology.

The laboratory of experimental pharmacology, otology and rhinology have rooms prepared for them in this hall and are well supplied with apparatus.

The anatomical laboratory occupies the third floor of the new Hall of Anatomy and is fitted and equipped throughout with materials and instruments best adapted for anatomical work.

PHYSICAL LABORATORY

The department of physics occupies the Hall of Physics, a plain structure 60 by 90 feet.

The large north room of the basement is equipped with a number of dynamos and other apparatus, with a switch-board wired to all parts of the building. Another room of the basement is given to the storage battery.

The basement also contains a shop furnished with electric power and equipped with wood and metal-working lathes, drill-press, cabinet-maker's bench and necessary tools. This shop furnishes an opportunity for the making of new and the repair of old apparatus.

On the first floor are the offices and several special laboratories for optics, electricity, heat, etc. One room contains the physical library, and serves also as reading and seminary room.

The lecture room on the second floor, with a seating capacity of 175, is fitted with conveniences for physical demonstrations, such as facilities for darkening the room, and for projection by sunlight and various sources of artificial light. Connected with the lecture room is a commodious apparatus and preparation room. A recitation room, a large, well-lighted elementary laboratory, and a photographic laboratory occupy the remainder of the space on this floor.

A special room, free from disturbance from the outside is provided for advanced students who are studying special problems.

The laboratory is well supplied with lecture apparatus, and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in material for the study of mechanics, optics, and electricity. Most of the apparatus has been purchased in recent years and has been selected with great care, and some has been constructed for particular uses in this laboratory.

PSYCHOLOGICAL LABORATORY

The extensive psychological laboratory occupies a part of the second floor of the Hall of Liberal Arts. It includes in

common with the department of philosophy, the following rooms: two lecture rooms, a library and seminary room, an apparatus-room, a workshop, an observing-room, a recording-room, three general laboratory-rooms, and two offices.

The rooms are large and well lighted, supplied with gas and electric light, and have special provisions for darkening. They are heated and ventilated by a system of indirect radiation, and are supplied with water where needed. The rooms in the suite are connected by a system of concealed wires radiating from a central switchboard which has connections with a battery closet and the power house. Battery currents and the direct dynamo current may be drawn from several terminals in each room and any two or more rooms may be connected for experimental purposes by means of this system.

The observing-room is practically sound-proof, light-proof, and jar-proof. It is a room 12 by 14, with an ante-room 4 by 14, built inside of another room which rests upon a special foundation and has no solid contact with any other part of the building. It is lined, carpeted, and furnished in black, and is supplied with gas, electric light, switchboard connections, and a special heating and ventilating system. The main room is entered through four tight-fitting doors and when these are closed all communication with the outside takes place through telephone and electric recording instruments. In the typical experiments the observer is left alone in this room where the conditions of the experiment can be controlled, while the experimenter manipulates the instruments in and from the recording room.

The workshop is provided with bench, lathe, motor, tools, material for apparatus, drawing materials, mimeograph, etc.

The library and seminary room contains the departmental library, including the subjects of philosophy, psychology, logic, ethics, and æsthetics, and is open all day for the use of students.

The laboratory is equipped with a superior collection of apparatus, illustrative material, supplies, and conveniences for use in instruction and investigation in psychology. The general equipment of the laboratory is designed to fit the plan of instruction, according to which the student in psychology may, the first year, attend a course of lectures in

which a rich collection of illustrative material is used and experiments are performed before the class by the instructor. The second year, the student may himself perform a series of model experiments, and for the third and following years he may engage in the investigation of original problems. Accordingly the equipment falls into three classes: (1) apparatus, charts, and other material for use in class demonstration for the first year in general psychology, (2) a complete set of apparatus for standard exercises which constitute the laboratory course for the second year, and (3) apparatus and the varied means employed in the research work, for special tests, and for advanced demonstration experiments.

STATISTICAL LABORATORY

This laboratory is equipped with apparatus to illustrate methods of securing and compiling the rapidly increasing volume of statistical data published by the government and other agencies. The electrical machines and other devices used in the federal and state censuses are found here; calculating machines are at the disposal of the students, together with many of the instruments and devices used in the construction of diagrams and charts. This equipment is being increased as rapidly as possible, and ultimately the museum will have a complete assortment of the apparatus necessary for statistical work.

ZOOLOGICAL LABORATORIES

LABORATORIES OF ANIMAL BIOLOGY

The laboratories for animal biology at present occupy the west half of the first floor of the Natural Science Hall, together with a portion of the basement. As soon as the commodious New Hall of Science is ready for occupancy these laboratories and the cognate museums will be moved to that building.

The laboratory for the elementary courses receives light from the north. It is furnished with heavy oak, slate-topped

tables, particularly adapted to the anatomical and microscopical requirements of the work. The tables will accommodate thirty-two students at one time.

The equipment of this laboratory includes thirty-two compound microscopes, as many dissecting microscopes, the requisite accessory optical apparatus, a series of more than twelve thousand microscopical slides, a large number of anatomical preparations, charts, and models, physiological equipment, and the numerous pieces of minor apparatus, glassware, etc., incident to general biological work.

The laboratory for the several advanced courses is lighted from the west and south. It is furnished with tables and reagent racks, designed to meet the special requirements of the work pursued here. A smaller room opening from the main one supplies the conditions desired for apparatus of constant temperature. The equipment of this laboratory embraces special compound and dissecting microscopes, sliding microtomes of approved pattern, three Minot automatic microtomes for serial sectioning, a large Lillie water-bath for paraffin imbedding, a laboratory incubator for work in embryology, a warm chamber of ample size, a complete stock of biological reagents, sets of bottles for each student, a large assortment of glassware, a suspended pantograph, a series of more than four hundred charts, and ninety-three wax models by Ziegler illustrating the embryology of amphioxus, the trout, the frog, and the chick.

Opening from the main laboratories are smaller rooms available for students who are pursuing special lines of investigation. The basement laboratory is utilized for aquaria, anatomical tanks, animal cages, and appliances for various lines of special work.

A reference library in English, French, and German is kept in the laboratories, and is accessible at all times during the working hours. A subject index on the card catalogue system renders the literature more readily available.

LABORATORY OF COMPARATIVE ZOOLOGY

This laboratory has been newly equipped and is now able to furnish much better facilities than ever before. It is at

present situated on the second floor of Natural Science Hall (but see note above). The main items of the equipment are the following:

1. New laboratory tables designed especially for this work. They have glazed tops of alternating black and white squares to give suitable background for dissecting or examining delicate objects in glass dishes, and drawers for the accommodation of the dissecting tools, lenses, etc. The tables are provided with Welsbach burners in sufficient number to furnish the best light for either dissecting or microscopic work, and will accommodate twenty-seven students.

2. A high grade dissecting microscope, provided with a jointed arm and two double achromatic lenses, for each student. On the theory that the work in zoology can be done better with a good dissecting equipment than by relying too much on the compound microscope, the laboratory has been provided with the best dissecting microscopes and lenses that could be purchased.

3. Compound microscopes of good quality in sufficient numbers to supply all students in introductory courses are at present available and high grade instruments are furnished to those intending to pursue advanced or research work in zoology.

4. An Imperial sciopticon for use in illustrating lectures. This instrument is provided with electric light, and microscope-attachment.

5. A photographic camera with the usual accessories for photographic and lantern-slide work, together with a convenient dark-room.

6. A set of ordinary dissecting tools and a Coddington lens for each student, together with a very complete equipment in the way of dissecting pans and glassware, such as watch-glasses, petrie dishes, stender dishes, embryo dishes, slides, covers, etc.

7. The very extensive zoological collections in the museum of natural history are at the disposal of students in this department, furnishing abundant material in many groups for advanced systematic work.

In this connection should be mentioned the departmental library of zoological works, including a complete set of the *Annals and Magazine of Natural History*, most of the "Chal-

lenger'' Reports, and works of reference of various kinds covering the field of zoology in a general way, and admitting of special treatment of several groups which are particularly well represented in the museum.

ASTRONOMICAL OBSERVATORY

The students' ASTRONOMICAL OBSERVATORY is located conveniently on the University campus. It is furnished with a five-inch equatorial telescope by Grubb of Dublin, having circles, driving clock, position micrometer, helioscope, and solar and stellar spectroscopes; a transit instrument by William Wuerdermann, of Washington; a prismatic sextant and artificial horizon by Pistor and Martins, of Berlin; clock; chronometer; chronograph, etc.

The equipment for the lecture room includes a fine astronomical globe, a planetarium, a stereopticon, and a series of several hundred lantern-slides, to which additions are being made constantly. Numerous charts, models, and photographs furnish additional illustrative material.

The mathematical and astronomical library comprises over twelve hundred volumes, including many rare and valuable works.

The periodical literature devoted to these branches of science is also well represented on the files of the library.

MUSEUMS AND COLLECTIONS

MUSEUM OF ART AND ARCHÆOLOGY

This museum, which is located in the Hall of Liberal Arts, is provided with a considerable collection of materials for the study of archæology and the fine arts. It is also open daily to the public.

The collection contains numerous plaster casts of representative ancient statues, busts, reliefs, and architectural models. A cast of the Sophocles of the Lateran, the gift of the class of 1901, is exhibited in the main corridor of the Hall of Liberal Arts.

The museum is also provided with several hundred large mounted photographs, especially for the illustration of ancient and mediæval art and architecture.

Exhibitions of work done by students in the department of fine arts are made from time to time, and the display of other artistic material is designed.

COMMERCIAL MUSEUM

The museum has been founded to provide practical instruction in commercial subjects. The products of the several countries and the various stages in the manufacture of the raw products into finished and by-products are shown. An attempt is made to have samples of all articles produced from a given raw product. This material is supplemented by views showing the method of culture and the various processes of its manufacture that cannot be well illustrated by samples of the unfinished product.

EDUCATIONAL MUSEUM

The Educational Museum comprises the materials representing all phases of model school room instruction, and also materials representing educational practices of the past.

Valuable collections of old text-books, books of collateral literature, models of work executed by pupils, including examination papers, written digests, laboratory notes, papers, drawings, work in color, designs in wood, metal, clay, or paste-board, photographs, plans, and descriptions of school buildings, have been made.

The museum will be glad to receive contributions of such articles as have been mentioned from persons interested in this enterprise. All objects should be sent to "The Educational Museum," and all correspondence addressed to the Professor of Education. Prompt acknowledgement will be made.

MUSEUMS AND COLLECTIONS OF NATURAL HISTORY

ETHNOLOGICAL COLLECTIONS

Considerable ethnological material is in the museum, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukchees, and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot of Sioux City has added very largely to this department of the museum. The late Dr. Russell was active in securing ethnological specimens illustrating the life and manufactures of the Crees, of other northern tribes of Indians, and of the Esquimaux.

Mr. H. M. Griffith of the Fifty-first Iowa Volunteers brought from Luzon a collection which he has generously donated to the museum. To this will soon be added an exceedingly valuable series of models of houses, boats, fish traps, agricultural implements, etc., secured from the Philippine exhibit at St. Louis.

A small collection illustrating the ethnology of the Hawaiian Islands was secured by the Curator in 1902.

GEOLOGICAL COLLECTIONS

The geological museum includes:

1. A large series of building stones, fossils, earths, etc., collected chiefly in the prosecution of the state geological sur-

veys between the years 1856 and 1870. These collections are constantly increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. Mineralogical collections embracing the metalliferous, non-metalliferous, and rock-making minerals.

4. The petrological collections includes several hundred rock specimens illustrating the various types of igneous and sedimentary rocks, their mineralogical composition and structural features.

5. A collection of cycads from Mesozoic sandstone in the Black Hills.

6. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

7. A collection illustrating general economic geology.

A beautifully preserved skeleton of a mosasaur (*Platycarpus*) has lately been added to the geological collections through the generosity of the Davenport Alumni Association.

During the year additions have been made to the collections both by purchase and gift, as well as by the efforts of the members of the department.

HERBARIUM

The herbarium is located in two rooms on the second floor of the Natural Science Hall. It contains:

1. A large collection of myxomycetes from all parts of the world, but particularly rich in North American forms.

2. A very large and constantly increasing collection of fungi, both parasitic and saprophytic, from all parts of North and Central America.

3. A collection of lichens, representing most of the species of the United States.

4. An increasing collection of mosses and liverworts, chiefly North American, but containing representatives from all parts of the world.

5. A large collection of ferns and related plants from both hemispheres, including an especially complete series from tropical America.

6. A collection of many thousand flowering plants, rep-

representing very fully the flora of North America, and especially rich in Central American and European forms. The number of plants in the herbarium exceeds 200,000.

7. A collection of seeds and dry fruits, including cones, representing the flora of North America chiefly, but containing also much material from the tropics.

8. A collection of the principal woods of North America.

9. A collection of economic plant products, including plant fibers, *materia medica*, etc.

10. A very extensive collection of Iowa plants, including all groups represented in the state. These are separate from the general herbarium, and offer an excellent opportunity to students who desire to study the state flora.

11. A large collection of fossil leaves, etc., not now displayed for lack of room.

The collections of herbarium, thanks to friends and collectors in various parts of the world, are steadily increasing in extent and value. It is hoped that private collectors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

MUSEUM OF NATURAL HISTORY

The museum of natural history has attained a rank second to none in the universities of the West and is daily becoming more valuable through donations of material by friends of the University. As soon as the New Hall of Sciences is ready for occupancy the museum will be removed from the Natural Science Hall to the large rooms provided and constructed especially for storing these collections.

By the generosity of the collector the Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot, of Sioux City, has donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds, and anatomical preparations.

During the last fifteen years expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnipeg country, Lake Athabasca, Great Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, Atlantic coast, British West Indies, the Bay of Naples, and the Hawaiian Islands.

Partly through purchase, but more largely through donation, important additions have been made to the museum in the way of material secured from the Louisiana Purchase Exposition at St. Louis. These have come mainly through the commissions representing the Philippines, Ceylon, East Indies, Nicaragua, Honduras, Argentine Republic, Egypt, and Venezuela.

More than half of the natural history collection is included in the *reserve series*, which has been arranged and labeled with the intention of making the material of the utmost practical use to students of natural history.

A library of reference for the use of students of zoology is placed on the museum floor and a free use of all the material in the various collections is encouraged, for which purpose a convenient study room has been provided for the use of students and specialists.

ZOOLOGICAL COLLECTIONS

1. **MAMMALS**—A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A good series of the larger mammals of North America has been secured through the kindness of Mr. D. H. Talbot, and the efforts of the late Dr. Frank Russell, who returned from the far north with an exceptionally fine series of the larger mammals of that region, including five good specimens of the musk ox.

2. **BIRDS**—The ornithological material in the museum

now embraces about 12,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides a large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and the emu, of great value.

The Bond collection of birds of Wyoming, donated, together with a large collection of Iowa birds, by Mr. Frank Bond, of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq., of England.

The Talbot collection of American birds, embracing thousands of specimens, mostly from the Mississippi valley.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, the late Dr. Frank Russell, and Professor A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg country, Great Slave Lake, Athabasca Lake, the Mackenzie river, and the Arctic coast, made by Dr. Frank Russell.

A small but valuable collection of birds of the Hawaiian Islands, collected by the Curator in 1902.

The curator has donated his study series of over 800 bird skins from Central America and the Bahama Islands.

A series of fifty-six specimens of birds from Ceylon was secured at the Louisiana Purchase Exposition.

3. REPTILES—The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Ex-Regent B. F. Osborn has donated his large collection of alcoholic specimens, which consist principally of reptiles, thus nearly doubling the series of these forms.

The U. S. Bureau of Fisheries has donated to the University the series of American turtles recently exhibited at St.

Louis, and a fine mounted crocodile was secured from the Philippine exhibit.

4. **FISHES**—Professor B. Shimek has presented the museum with his entire collection of fresh-water fishes, of which the museum now has seven hundred specimens, besides a number of marine forms.

The U. S. Bureau of Fisheries has recently donated, in addition to previous contributions, over 2,000 specimens of North American and Hawaiian fishes, and the Alaska Packers' Association has promised a full series of specimens to illustrate the embryology of the salmon.

Mr. E. E. Watson donated a collection of marine fishes collected by himself on the coast of Maine, and Mr. Herbert Moon secured a number of specimens from Puget Sound; both during the summer of 1904.

5. **INSECTS**—The museum has a good collection of the local fauna, which is largely used in class work, in addition to a series of several thousand specimens from other regions which are useful for reference. Advanced students will find ample material for research work in many orders. The exhibit series shows a number of the most striking types in the Lepidoptera and Coleoptera, and illustrates some interesting principles in the line of coloration and adaptive structures.

6. **MARINE INVERTEBRATES**—A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by marine forms collected during two expeditions to the Bahamas, Cuba, and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors Calvin and Nutting.

A carload of marine specimens was secured by the Bahama expedition in 1893. This collection contains a large number of deep-water forms, thus giving the University special advantages in the matter of marine materials for exhibition and study.

A valuable series of marine forms of the more fragile

and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the *Stazione Zoologica* at Naples, where the most superb preparations of the beautiful forms are made. These are supplemented by a number of gelatine models of medusæ, hydroids, etc., imported from Germany.

The museum is to receive one entire series of the marine forms collected by the U. S. S. "Albatross" during the Hawaiian cruise of 1902.

The most important addition to the department of marine invertebrates secured during recent years is promised by the Philippine Commission at the Louisiana Purchase Exposition and consists of a particularly fine series of the superb mollusca of the East Indies, as well as many specimens of corals, sponges, etc.

The Shimek collection of land and fresh-water shells, embraces nearly all the species known to occur in Iowa, together with many exotic species.

7. OSTEOLOGICAL PREPARATIONS—A series of mounted skulls and skeletons, illustrating the osteology of typical series of vertebrates, is of the greatest value to students of comparative anatomy and zoology. The skeleton of a large whale (*Balaena biscayensis*) was secured in 1898, and a fine specimen of Steller's sea lion in 1899.

The museum now possesses skulls or entire skeletons of typical species of nearly all families of mammalia.

PATHOLOGICAL MUSEUM

The museum contains a valuable and varied collection of preparations, preserved in natural colors and adapted for illustration of the different pathological conditions. The specimens are secured principally from the University clinics and autopsies, by personal visits to the pathological institutes of the large European centers, and by contribution from professional friends. Physicians are earnestly requested to send to the curator of the museum any specimens of pathological anatomy. For all such favors credit will be given by labeling the preparations with the name of the donor before placing them in the museum.

PUBLICATIONS, SOCIETIES, RELIGIOUS INFLUENCES, ETC.

UNIVERSITY PUBLICATIONS

TECHNICAL BULLETINS

Natural History Bulletin—The laboratories of natural history inaugurated in 1888 the publication of bulletins for the purpose of preserving a record of the work prosecuted along the lines of botany, geology, and zoology. Four volumes have thus far appeared in sixteen numbers, and the fifth volume is in process of publication. The numbers have a large circulation and are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or in material.

The Transit is an engineering journal published annually by the University. It is edited by a committee of the Engineering Society, and contains the results of original research in engineering problems.

The Bulletin of the Homeopathic Medical College has been published since 1895.

The State University of Iowa Studies in Psychology is a biennial publication devoted to experimental psychology. It was begun in 1897.

The State University of Iowa Studies in Sociology, Economics, Politics, and History—Volumes I and II of this series, containing respectively 296 and 150 pages, have already appeared and will be followed by others.

Contributions from the Physical Laboratory of the State University of Iowa—The first number appeared during the past year.

Provision has been made also for the publication of bulletins of education and linguistic science.

CALENDAR AND ANNOUNCEMENTS

By authority of the Board of Regents separate announcements of the following University organizations will be sent gratuitously, postage paid, to all persons who apply for them: Graduate College; College of Liberal Arts; of Law; of Medicine; of Homeopathic Medicine; of Dentistry; of Pharmacy; of Applied Science; the School of Political and Social Science and of Commerce; the Summer Session; the Medical and Surgical Clinics; the Hospitals; Nurses' Training Schools; and the School of Music. In asking for announcements, the organization or subject concerning which information is desired should be stated. The annual calendar of the University consists of the above announcements, together with the roster of the University staff of administration and instruction, and catalogue of all students. It is for exchange with other institutions and for the General Assembly. Otherwise it may be had only upon special request and payment of postage.

PUBLICATIONS OF STUDENTS

The Daily Iowan—A University newspaper edited by the students.

The Hawkeye—A University annual published by the junior class.

The Middletonian—Published twice a year by the students of the College of Medicine.

LITERARY, SCIENTIFIC AND FORENSIC SOCIETIES

The literary, scientific and forensic societies maintained by the faculty and students of the University afford an important means of general culture, scientific research, and literary and forensic training, and thus form a valuable element as well as an attractive feature in University life.

Of those conducted by the faculty the Baconian has for its object discussion of scientific questions; the Graduate Club is devoted to the interests of the Graduate College; the Political Science Club discusses questions of history, politics, economics, law, education, and ethics; the Whitney Society is devoted to the field of language and literature and the methods of teaching these subjects; the Classical Club is organized for

reading and discussion of Greek and Latin authors; the Writers' Club is an organization of members of the department of English and graduate students in English; the Edda is devoted to the interests of Scandinavian languages and literature; the Philosophical Club meets monthly for the discussion of problems in philosophy, psychology, logic, ethics, and æsthetics; the Cercle Francais has social gatherings for practice in colloquial French, and at its meetings papers are read in English or in French; the Art Club meets weekly for the discussion of special subjects in the fine arts.

Phi Beta Kappa elects to membership from the graduating class on the basis of high scholarship, a certain number who have completed a classical or philosophical course.

Sigma Xi is organized to encourage original research in science, and elects to membership from the senior class limited number of persons who give promise of becoming investigators in some department of science.

The Engineering Society, the Marshall Law Society, the Middletonian Society, the Hahnemannian Society, and the Mortar and Pestle club, are organizations of students in the professional colleges.

Among the literary societies open to all students are Polygon, and Ivy Lane. The Irving Institute, the Zetagathian Society, the Philomathean Society for men; and the Hesperian Society, the Erodelpian Society, and the Octave Thanet Society for women, hold weekly meetings for improvement in debate, oratory, writing, and declamation.

MUSICAL ORGANIZATIONS

The University School of Music (affiliated with the University) was organized in 1906. The outline of the courses in this department will be found in the separate announcement.

Volunteer organizations for the promotion of both vocal and instrumental music, under the direction of instructors in the School of Music, are heartily encouraged.

Among such organizations are a military band, a University orchestra, men's first and second glee clubs, a women's glee club, a mandolin club, a string quartette, vocal quartettes, and class and departmental organizations.

PUBLIC LECTURES

The regents encourage the visits of distinguished scholars, specialists and men in public affairs to give addresses, under the title of "Public Lectures," open to all the University. Thus the students have the latest information as to what is current in the world of letters, science and art, and public affairs.

A local lecture bureau furnishes annually a popular series of literary and musical entertainments.

DEBATE AND ORATORY

The Forensic League includes the Zetagathian, Irving, Philomathean, and the Marshall Law societies. This League is a member of the Northern Oratorical League, consisting of Oberlin College, Northwestern University, and the Universities of Wisconsin, Michigan, Chicago and Iowa, and conducts inter-collegiate debates, for the year 1907-1908, with the State Universities of Illinois and Nebraska.

RELIGIOUS INFLUENCES

Y. M. C. A. AND Y. W. C. A.

The Young Men's and Young Women's Christian Associations are the centers of the religious life of the University and active factors in all forms of moral and Christian work properly within the scope of such organizations. All students of good moral character are invited to membership either active or associate. Through the exertions of these associations Close Hall has been erected, mainly from funds contributed by the faculty, students, and alumni of the University, and the citizens of Iowa City. It is a spacious and convenient building, furnishing reading rooms, reception rooms, and offices for the associations. It is extensively used for the meeting of the associations, as well as for the social, literary, and class gatherings of the students.

Through the generosity of Hon. T. S. Parvin the social room of the Y. W. C. A. has been finely fitted out with furni-

ture, cabinet, and pictures as a memorial to his wife and daughter. A similar room for the Y. M. C. A. has been suitably furnished by Mr. W. D. Cannon, Jr., of Iowa City.

The associations strive to be useful to all students in every feasible way. Members meet new students at the trains, aid them in securing suitable rooms and boarding places, hold receptions at the opening of the year and on various occasions, and maintain an employment bureau. The general secretary is glad to be helpful to students on all occasions.

Churches not affiliated with the Y. M. and Y. W. C. A. have special societies for their student members.

UNIVERSITY ASSEMBLIES

University assemblies with brief religious exercises are held weekly, and although the attendance is voluntary, they are crowded. Thus the purpose of cultivating the moral, religious and social spirit of the University is heartily recognized.

CONVOCATIONS: CHURCHES

In addition there are occasional convocations of all the faculties and students, in which addresses by distinguished speakers are given. Upon these occasions when the entire University is convened, degrees may be conferred.

Besides the opportunities offered by the Christian Associations and the positive influence exerted by them, the churches of the city, in which the members of the faculty are a large factor, take a deep interest in the students of the University and heartily welcome them to their public services and to share in their religious activities and social life. All the prominent churches and denominations are represented, and relative to its population Iowa City deserves to be called the "city of churches."

HOSPITALS

The two hospitals connected with the University afford the best of care and treatment for students seriously ill. Pro-

vision for free beds for students is commended to the attention of generous friends of the University.

THE DEAN OF WOMEN

Special provision is made for the comfort and welfare of the young women of the University by the appointment of a dean of women, who is always ready to help or advise any woman student who may need such assistance. She will recommend boarding and lodging places so far as she is able, see that students who are ill while away from home are put under proper care, assist, as far as possible, young women who wish to earn their way through college, correspond with parents and guardians who desire to make inquiries regarding their daughters or wards, take an interest in the women's organizations and be ready to make such suggestions as may seem to her to be for the good of all.

A list of HOMES FOR YOUNG WOMEN in which there are certain reasonable house rules as to hours, company, etc., may be had upon application to the dean of women. This list will be made up after careful inspection and will be revised whenever necessary.

PHYSICAL TRAINING AND ATHLETICS

The University authorities encourage physical training as acquired in the gymnasium, in military training and in the exercises and sports on the athletic field, but only in such amount and of such character as is compatible with the higher objects of the University. Intercollegiate contests are allowed and are held with the leading colleges and universities of the Middle West, but under conditions as to membership, organization of teams, and leave of absence which are determined by the athletic board.

The above named athletic board consists of five students, five members of the faculty, and two members from the alumni of the University. The general control and supervision of all athletics are in the hands of this board.

The University is a member of the "College Conference," comprising the Universities of Chicago, Illinois, Indiana,

to the effect that the applicant is an industrious person of good character and entitled to the relief sought on account of pecuniary need. Blank forms for such certificates may be had by addressing the President of the University.

The Board of Regents has made provision whereby all honorably discharged soldiers or sailors of the Spanish-American war, desiring to enter the College of Liberal Arts and the College of Applied Science, may have the tuition fee of twenty dollars remitted. To such persons in the professional colleges there will be an annual remission of twenty-five dollars; one-half of this amount to be applied on each semester's tuition.

A. WHITNEY CARR FREE SCHOLARSHIPS

The late Mr. A. Whitney Carr, of Jordan, N. Y., believing that education in the higher institutions of learning should be as free to every comer as it is in the common schools, and desiring to contribute as far as possible to this end, has generously donated what is known as "The A. Whitney Carr Free Scholarship Fund," for the creation of free scholarships for the benefit of poor and worthy young men and women who are unable to educate themselves without aid, the interest alone to be used for this purpose, the principal to be kept intact.

In accordance with the wish of the founder, the A. Whitney Carr scholarships will be granted, so far as the fund will allow, to all applicants who are poor and worthy in respect to character and intellectual ability, without regard to sex, race, or color.

Scholarships apply to all the years of the college course, are awarded annually, and are liable to be revoked at any time if the recipients are inefficient, or found not to be worthy or justly entitled to them.

The value of each scholarship is at least \$20 for each of the four years of the college course. The value will be realized by students in having their tuition and other fees free, the tuition of persons receiving awards being paid from the scholarship fund.

In case the number of scholarships awarded does not exhaust the income of the fund, holders of scholarships who are crippled or are physically unable to earn the means to

pay expenses other than tuition, and are without help from parents or friends, may receive additional assistance at the discretion of those having the disposal of the fund; but this additional assistance is not to exceed \$100 a year, save in cases of extreme disablement and destitution, when it may reach the amount of \$150 a year.

Scholarships will not be granted to applicants addicted to the use of tobacco or intoxicating liquors.

Scholarships will be awarded by the President of the University and committees of the College of Liberal Arts and the College of Applied Science on the basis prescribed by the founder. A candidate for assistance from this fund must have his application endorsed by the principal of the preparatory school from which he is accredited to the University, and by at least one other person of prominence familiar with the character and financial circumstances of the applicant.

HONOR SCHOLARSHIPS

Every accredited preparatory school in the state is entitled each year to one honor scholarship in the College of Liberal Arts or in the College of Applied Science, the incumbent of such scholarships being selected by the authorities of the schools on a basis of high standing. The holders of honor scholarships are exempt from payment of tuition during the four consecutive years of their college course.

Further information in regard to the conditions and regulations governing selection of candidates will be sent upon application.

PRIZES

PICKARD PRIZE—A prize of \$20 was offered last year by Dr. J. L. Pickard for the encouragement of extempore speaking to the student in political science who was awarded first rank in competitive extemporaneous debate. A prize of the same value is again offered for this year. The competitive debate will take place early in June.

LOWDEN PRIZES—Frank O. Lowden, Esq., of the class of 1885, offers prizes of the value of \$25 each for excellence in Latin, in Greek, in botany, and in geology, and \$50 in mathematics.

MAYER PRIZE—Mr. Max Mayer of Iowa City has established a prize of the annual value of \$25 for excellence in

scholarship and athletics. This prize is open to students of all colleges of the University.

THE LOCAL ALUMNI ASSOCIATION PRIZE—An annual prize of free tuition, \$20, is offered to the freshman from Johnson county who passes the best special examination set for this purpose.

LOWDEN PRIZE IN DEBATE—Frank O. Lowden, Esq., of the class of 1885, offers an annual prize of fifty dollars for excellence in debate.

OLD ENGLISH PRIZE—The Early English Text Society of London offers one of its texts as a prize for excellence in Old English.

A citizen of Iowa City offers a copy of Gray's Field Manual for the best work in the botany of the spring term.

Mr. Lowden has given \$3,000 as an endowment to the Northern Oratorical League. As this University is a member of the league, students are invited to compete and share in the benefits of this endowment.

BRYAN PRIZE—Mr. William Jennings Bryan has established an annual prize of the value of \$10 for the best essay on a subject pertaining to the science of government. The prize is open to any student in the University.

HAMILTON CLUB PRIZE—The Hamilton Club of Chicago offers two prizes of the value of \$100 and \$50 each to the students who win first and second places respectively in the annual Hamilton Club oratorical contest.

THE JOHN BARRETT PRIZES—The Honorable John Barrett, the United States Minister to Colombia, offers prizes of \$100, \$75.00, \$50.00, to be awarded to the authors of the best papers on certain political, economic and historical subjects. Undergraduate, professional and graduate students are alike eligible. A list of the subjects and full information concerning the conditions of the award may be had from the President's office. •

Special prizes are offered in certain departments. Reference to descriptions of these prizes may be found in the INDEX.

UNIVERSITY EXTENSION

The State University of Iowa was among the first in the United States to attempt to popularize higher education by organizing courses of lectures by University professors at points remote from the institution. For years this work has been carried forward with no small success in all the more important cities of Iowa. As will be seen by reference to the special announcement on this subject, the University offers an unusually extended list of topics to those seeking lectures of University grade. Within certain obvious limits, all the best that is offered at Iowa City, is at the service of every community in Iowa.

In connection with the courses of lectures offered, classes may be organized and systematic work undertaken leading in due process to University credit.

Many of the lectures, especially those pertaining to scientific subjects, are illustrated, and, with little additional cost, a stereopticon is sent with the lecturer to any center.

All interested are referred to the Announcement of University Extension Lectures, to be had by addressing Professor THOMAS H. MACBRIDE, Director of University Extension, or Professor WILLIAM C. WILCOX, Secretary of University Extension, Iowa City, Iowa.

**THE
COLLEGE OF LIBERAL ARTS**

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.

PRESIDENT.

AMOS NOYES CURRIER, LL. D.

DEAN, and Professor and Head of the Department of Latin Language and Literature.

MRS. MABLE MONGOMERY VOLLAND, B. A.

ACTING DEAN OF WOMEN; Assistant in English.

PROFESSORS

SAMUEL CALVIN, PH. D., LL. D., F. G. S. A.

***Professor and Head of the Department of Geology.**

THOMAS HUSTON MACBRIDE, PH. D.

Professor and Head of the Department of Botany.

†GEORGE THOMAS WHITE PATRICK, PH. D.

Professor of Philosophy.

CHARLES BUNDY WILSON, M. A.

Professor and Head of the Department of German Language and Literature.

LAENAS GIFFORD WELD, M. A.

Professor and Head of the Department of Mathematics, Dean of the Graduate College.

CHARLES CLEVELAND NUTTING, M. A.

Professor and Head of the Department of Zoology, and Curator of the Museum of Natural History.

ISAAC ALTHAUS LOOS, LL. D.

Professor and Head of the Department of Political Economy and Sociology; Director of the School of Political and Social Science.

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.

Professor and Head of the Department of Chemistry and Toxicology.

***The names of Professors and Instructors of different grades are arranged in groups according to seniority of appointment to present rank.**

†Absent on leave.

WILLIAM CRAIG WILCOX, M. A.

Professor of American History, and Head of the Department of History.

GILBERT LOGAN HOUSER, PH. D.

Professor of Animal Biology, and Director of the Zoological Laboratories.

BENJAMIN FRANKLIN SHAMBAUGH, PH. D.

Professor and Head of the Department of Political Science.

CLARK FISHER ANSLEY, B. A.

Professor and Head of the Department of English.

LEONA ANGELINE CALL, M. A.

Professor of Greek Language and Literature.

HENRY EVARTS GORDON, M. A.

Professor of Public Speaking.

FREDERICK ELMER BOLTON, PH. D.

Professor and Head of the Department of Education; Director of the Summer Session.

BOHUMIL SHIMEK, C. E., M. S.

Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium.

FRANKLIN HAZEN POTTER, M. A.

Professor of Latin.

CARL EMIL SEASHORE, PH. D.

Professor of Psychology, and Head of Department of Philosophy and Psychology.

HARRY GRANT PLUM, PH. D.

Professor of European History.

HENRY FREDERICK WICKHAM, M. S.

Professor of Entomology, and Assistant Curator of the Museum of Natural History.

†FRANK ALONZO WILDER, PH. D.

Professor of Petrology, Economic Geology, and Mining.

ARTHUR GEORGE SMITH, M. A.

Professor of Physics and Mechanics.

GEORGE TOBIAS FLOM, PH. D.

Professor of Scandinavian Languages and Literatures, and Acting Professor of English Philology.

CHARLES WARREN WEEKS, B. S., First Lieutenant 30th Infantry, U. S. A.

Professor of Military Science and Tactics, and Commandant of the Cadet Battalion.

†Absent on leave.

KARL EUGEN GUTHE, PH. D.

Professor and Head of the Department of Physics.

FOREST CHESTER ENSIGN, M. A.

Professor in Education, and Inspector of High Schools.

EDWIN DILLER STARBUCK, PH. D.

Professor of Philosophy.

CHARLES HEALD WELLER, PH. D.

Professor of Greek and Archæology, and Acting Head of the Department of Greek.

STEPHENS HAYES BUSH, A. M.

Acting Professor in Charge of Romance Languages.

ASSISTANT PROFESSORS

FREDERICK BERNARD STURM, B. A.

Assistant Professor of German.

CLARENCE WILLIS EASTMAN, PH. D.

Assistant Professor of German.

HERBERT CLIFFORD DORCAS, M. A.

Assistant Professor of Education, University Examiner and Registrar.

CARL LEOPOLD VON ENDE, PH. D.

Assistant Professor in Chemistry.

WILLIAM JAY KARSLAKE, PH. D.

Assistant Professor in Chemistry.

HENRY LE DAUM, M. A.

Assistant Professor of Romance Languages.

FRANK EDWARD HORACK, PH. D.

Assistant Professor of Political Science.

PAUL SKEELS PEIRCE, PH. D.

Assistant Professor of History.

FRANK DE WITT WASHBURN, A. B.

Assistant Professor in Charge of Fine Arts.

ROBERT BRADFORD WYLIE, PH. D.

Assistant Professor of Botany.

LECTURERS AND INSTRUCTORS

JOSEPH JASPER McCONNELL, LL. D.

Lecturer on Education.

LUTHER ALBERTUS BREWER, M. A.

Lecturer on Journalism.

SAM BERKLEY SLOAN, B. A.

Instructor in English.

PERCIVAL HUNT, M. A.

Instructor in English.

EDWIN FORD PIPER, M. A.

Instructor in English.

HUGO WILHELM KOEHLER, B. A.

Instructor in German.

FRANK ALBERT STROMSTEN, D. Sc.

Instructor in Animal Biology.

RICHARD PHILIP BAKER, B. Sc.

Instructor in Mathematics.

CHARLES DELOS POORE, A. C.

Instructor in Chemistry.

LEE PAUL SIEG, M. S.

Instructor in Physics.

GUSTAVE ERIC WAHLIN, Ph. D.

Instructor in Mathematics.

LEWIS HENRY HANEY, Ph. D.

Instructor in Economics.

FRED JAMES LONGWORTH, A. C.

Instructor in Chemistry.

HUGH STRAIGHT BUFFUM, Ph. D.

Acting Instructor in Education.

JOHN FRANKLIN REILLY, A. M.

Acting Instructor in Mathematics.

ARCHIE GARFIELD WORTHING, B. A.

Acting Instructor in Physics.

CHARLES GAMBLE SIMPSON, M. A.

Acting Instructor in Mathematics.

VALBORG KASTMAN, B. A.

Assistant Instructor in Physical Training.

MARY GROVE CHAWNER, M. A.

Assistant Instructor in English.

HERTHA LOUISE VOSS, B. Ph.

Assistant Instructor in French.

CLARENCE WYCLIFFE WASSAM, M. A.

Assistant Instructor in Political Economy and Sociology.

ROE EUGENE REMINGTON, B. A.

Assistant Instructor in Chemistry.

ARTHUR DAVISON FICKE, A. B.

Assistant Instructor in English.

ALICE RIGBY, M. A.

Assistant Instructor in English.

DANIEL STARCH, PH. D.

Assistant Instructor in Philosophy.

MARK SEAVEY CATLIN, B. PH.

Assistant Instructor in Charge of Athletics.

PAUL FREDERICK EDINGER, B. A.

Assistant Instructor in Geology.

EDWARD ACOMB RULE, B. S.

Assistant Instructor in Charge of Gymnastics.

RALPH EUGENE ROOT, B. S.

Assistant Instructor in Mathematics.

JESSIE MARIE JEPSON, B. A.

Assistant Instructor in Public Speaking.

ASSISTANTS IN INSTRUCTION AND ADMINIS- TRATION

JOHN WILLIAM CARVILLE.

Attendant in Geology.

LUCY MARY CAVANAGH, B. S.

Herbarium Assistant in Botany.

HENRY GIVIN COX,

Bandmaster.

HOMER R. DILL,

Taxidermist.

EVIE JAMES EDWARDS,

Undergraduate Assistant in Physics.

CARL WILLIAM GRAY,

Attendant in Chemistry.

OTTO FREDERIC KAMPMEIER,

Undergraduate Assistant in Animal Biology.

RALPH GLENN KLINE,

Assistant in Zoological Museum.

WALTER MITCHELL,

Assistant in French.

GEORGE AUERBACH NEUSTADT,

Undergraduate Assistant in Animal Biology.

JOHN GEORGE ROHRIG,

Undergraduate Assistant in Chemistry.

MALCOLM GLENN WYER, M. L., B. L. S.

Librarian.

HARRIET EMMA HOWE, B. L. S.

Cataloguer.

CAROLINE VALERIA LANGWORTHY, B. L. S.

Reference Assistant.

JENNIE ELLEN ROBERTS, B. PH.

Assistant Cataloguer.

JOANNA GLEED STRANGE, B. A.

Assistant in Library.

ROBERT ELMER LONG,

Undergraduate Assistant in Library.

STANDING COMMITTEES OF THE FACULTY OF THE COLLEGE OF LIBERAL ARTS, 1906-1907

ADMISSION, • CLASSIFICATION, AND CONDITIONED STUDENTS:
Professors Loos, Currier, Nutting, Rockwood, the Registrar (Secretary, *ex officio*).

COURSES OF STUDY: Professors Currier, Macbride, Weld, Loos, Houser, Ansley, Bolton, Seashore.

DISCIPLINE: The Dean, Professors Macbride, Loos.

LIBRARY: The President, Professors Nutting, Seashore, Ansley, Smith.

MILITARY AND PHYSICAL TRAINING: Professors Smith, Weeks, Rule, Gordon, Ohle.

PHYSICAL TRAINING FOR WOMEN: Professor Call, The Acting Dean of Women, Miss Kastman.

PREPARATORY SCHOOLS: Professors Ensign, Macbride, Potter, Wickham, Plum.

PROGRAM: Professor Ansley, the Registrar, Professor Guthe.

RULES: Professors Wilson, Shambaugh, Ansley.

SUMMER SESSION: Professors Bolton, Calvin, Wilcox, Shimek, Weller.

REQUIREMENTS FOR ADMISSION

Applicants for admission to the freshman class of the College of Liberal Arts should be at least sixteen years of age, and must present satisfactory evidence of having completed the preparatory studies specified below. An examination is required of all students who do not present acceptable certificates.

For admission to first year standing thirty preparatory credits* are required. No student will be admitted whose deficiencies exceed the amount represented by three credits, except as provided in the following paragraph. Candidates having deficiencies not exceeding this limit may be admitted upon condition that they complete their preparatory work within the first year after admission. Students who are admitted with conditions can make them up in the University, in the accredited preparatory schools of the city, or under the direction of tutors approved by the faculty.

Applicants for admission who present thirty credits in acceptable preparatory subjects but who are deficient in required preparatory work may be admitted as unclassified students. When all requirements for first year standing have been met, such unclassified students will be transferred to the list of regular candidates for a degree.

Graduates from three-year high schools may be admitted on like conditions.

Of the thirty preparatory credits required for admission, *seventeen are specific requirements, and thirteen, elective.*

*In estimating the amount of work required for admission, a *preparatory credit* is regarded as the equivalent of one study daily for a semester of eighteen weeks on the basis of four studies a day; thus eight credits stand for a normal year's work.

It is expected that the following branches of study will be completed in the grammar school: Practical arithmetic, reading, penmanship, elementary English grammar and English composition, geography, bookkeeping (single entry), physiology (the statutory requirements for primary and grammar schools), United States history (two semesters' work).

SPECIFIC AND ELECTIVE REQUIREMENTS FOR ADMISSION

One foreign language (See note 2).....	4 credits
English,	6 credits
History (may include civics and economics),.....	2 credits
Algebra,	3 credits
Plane geometry,	2 credits
	—
	17
Electives,	13 credits

NOTES

1. The specific and elective requirements in the foregoing paragraph are in themselves sufficient for admission to the combined courses in *medicine, *homeopathic medicine, and dentistry.
2. Students who offer only two years of foreign language for entrance will have their electives limited inasmuch as they will be required to carry at least twenty semester hours of foreign language before graduation, of which sixteen hours must be in one foreign language.
3. Students who present no preparatory credits in foreign language will be registered as unclassified students until they have satisfactorily completed, without University credit, the amount of work laid down in this announcement as constituting two years of preparatory work in some one foreign language. Facilities will be provided for doing this work in the University, in the accredited schools of Iowa City, or under tutors approved by the University.

ELECTIVES

The electives presented for admission may consist of additional work in foreign languages to complete the entire thirty

*Students who fail to present at least one year of work in Latin for admission to the combined course in medicine or in homeopathic medicine will be required to take the one-year course in Medical Latin at the University.

credits, or of additional work of approved character in English, history, solid geometry, or of science as outlined under **SUBJECTS REQUIRED OR ACCEPTED FOR ADMISSION, GROUP V**. Candidates are advised to present additional work in a foreign language, English, history, or solid geometry rather than to present the maximum of six semesters' work in science. When additional work in Latin or modern languages is presented as an elective, it is provided that not less than two years be given to some one language, and not less than one year to each additional language that may be offered.

EXAMINATIONS FOR ADMISSION

Applicants presenting proper certificates from accredited schools showing that they have completed the preparatory studies required for admission, as specified above will be admitted without examination. These certificates are to be made out on blank forms which will be furnished on application to the President of the University, and must contain specific statements as to the amount of work done in each study. Delay in matriculation will be avoided if these certificates are made out and forwarded to the University before September 1.

Applicants from accredited schools presenting certificates for work not fully meeting the requirements for admission may satisfy these requirements by passing examinations in the subjects in which they are deficient.

If an applicant for admission by certificate has completed the prescribed amount of preparatory work in certain branches of study in considerably less time than that indicated as being necessary under ordinary conditions, the University reserves the right to examine him in such branches of study.

Each applicant who is to be examined must arrive in the city early enough to be present *at his first examination as indicated in the programs given below*. He should present himself at once to the University Examiner, who will give all necessary directions. Regarding the fees charged for examinations at other than the times announced below see under **EXPENSES; SCHOLARSHIPS; PRIZES**.

PROGRAM OF EXAMINATIONS FOR ADMISSION

FIRST SEMESTER

WEDNESDAY, SEPTEMBER 18, TO SATURDAY, SEPTEMBER 21, 1907

Greek,	2 to 4 credits,	Wednesday,	2:00 P. M.
French,	2 to 4 credits,	Wednesday,	4:00 P. M.
German,	2 to 4 credits,	Thursday,	8:00 A. M.
Latin,	2 to 8 credits,	Thursday,	10:00 A. M.
English and English Grammar,	{ 2 credits,	Thursday,	1:30 P. M.
Literature,	2 credits,	Thursday,	3:00 P. M.
General History,	2 credits,	Thursday,	4:30 P. M.
English History,	1 credit,	Friday,	8:00 A. M.
U. S. History,	1 credit,	Friday,	9:00 A. M.
Civil Government,	1 credit,	Friday,	10:00 A. M.
Economics,	1 credit,	Friday,	11:00 A. M.
Algebra,	3 credits,	Friday,	1:30 P. M.
Plane Geometry,	2 credits,	Friday,	3:30 P. M.
Physical Geography,	1 credit,	Friday,	5:00 P. M.
Physics,	2 credits,	Saturday,	8:00 A. M.
Botany,	1 credit,	Saturday,	9:30 A. M.
Physiology,	1 credit,	Saturday,	10:30 A. M.
Arithmetic,	1 credit,	Saturday,	1:30 P. M.
Geography,		Saturday,	3:30 P. M.
Reading,		Saturday,	2:30 P. M.

SECOND SEMESTER

The examinations will be held between Thursday, February 6 and Saturday, February 8, 1908, according to a program which will be posted by the University Examiner before the close of the first semester.

ADVANCED STANDING

Students from approved colleges bringing proper certificates of work and standing will be admitted without examination. In determining their position in the University, how-

ever, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, *provided they enter not later than the beginning of the senior year*. The assignment of studies will be at the discretion of the faculty.

Graduates from the four years' course of the Iowa State Normal School will be given advanced standing of sixty semester hours without examination and will be required to spend two years at the University before receiving a degree.

The requirement that all applicants for admission to the University must bring certificates showing that they have completed two years' work in some one foreign language, applies also to applicants for advanced standing.

SUBJECTS REQUIRED OR ACCEPTED FOR ADMISSION

GROUP I—FOREIGN LANGUAGES

In the case of each of the four foreign languages which may be offered for admission a course of study is suggested. What the University demands, however, is proficiency in the subject rather than a particular course of study, and the courses are outlined simply to indicate how the necessary proficiency may be attained.

1. GREEK—Grammar;

Xenophon's *Anabasis* (four books);

Homer's *Iliad* (three books), including prosody.

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax, and a considerable working vocabulary. Exercise in writing Greek should be continued through the entire preparatory course.

2. LATIN—Grammar;

Cæsar (four books);

Cicero (six orations);

Vergil (six books), including prosody.

Equivalents in kind will be accepted for any part of the specific requirements. Sight reading should be taught and practiced from the first. An accurate and ready knowledge of grammatical forms and construction and a good vocabulary are of essential importance. Unless the student has acquired this knowledge, he is not prepared for freshman work in Latin.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course*.

3. FRENCH—A full statement of the work to be done and suggestions as to methods and available texts may be found in Section X, pages 75 to 91, of the *Report of the Committee of Twelve of the Modern Language Association of America* (Heath). The following course or its equivalent will be accepted:

First year: I. Grammar (with exercises), Fraser and Squair. II. Composition, based on *The Last Class*, and Grandgent's *Materials* (Heath). III. Translation: (1) *Daudet, Trois Contes Choisis*,; (2) Labiche, *Le Voyage le M. Perichon*; (3) Mérimée, *Colomba* or *Quatre Contes*. IV. Correct Pronunciation—to which much attention should be given.

Second year: I. Grammar (advanced), with special reference to syntax and idioms. II. Composition, based on *The Siege of Berlin*, Grandgent's *Materials*. III. Translation of not less than 250 pages of selections from the prose works of at least five nineteenth-century writers. IV. Pronunciation.

4. GERMAN—During the first year the work in German should comprise: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflections of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs, also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from seventy-five to one hundred pages of graduated texts.

During the second year the work should comprise: (1) the reading of about one hundred and fifty pages of literature in the form of easy stories and plays; (2) accompanying practice in the translation into German of easy variations upon the matter read; (3) continued drill upon the rudiments of the grammar.

A fuller statement of the work to be done and suggestions as to the methods and available texts may be found in Section VII of the *Report of the Committee of Twelve of the Modern Language Association of America* (Heath). This report should be in the hands of every teacher of modern languages.

GROUP II—ENGLISH

5. ENGLISH—Applicants for admission to the College of Liberal Arts are required to present at least six semesters' credits in English. Other credits in English may be presented as electives. If six credits only are offered in the subject, they should be as follows:

- a. Composition and rhetoric....2 2-5 credits.

Proper preparation for this requirement includes constant practice in writing, with careful correction and revision of themes. A part of the time should be devoted to the study of some good text-book.

- b. Literature.....3 3-5 credits.

Throughout the high school course much attention should be paid to English and American Literature. Entire master-pieces suited to the attainments of the class should be carefully studied. In addition, collateral reading should be assigned and written reports required. Among the master-pieces should be those suggested in the "uniform college entrance requirements" in English. For 1906-1908 these are as follows:

- (1) For careful study:

Burke's *Speech on Conciliation with America*; Macaulay's *Essays on Milton and Johnson*; Milton's *Minor Poems*; Shakespeare's *Julius Caesar*.

- (2) For general reading:

Addison's *Sir Roger de Coverley Papers*; Coleridge's *Ancient Mariner*; Eliot's *Silas Marner*; Goldsmith's *Vicar of*

Wakefield; Irving's Life of Goldsmith; Lowell's Vision of Sir Launfal; Scott's Ivanhoe; Scott's Lady of the Lake; Shakespeare's Merchant of Venice; Shakespeare's Macbeth; Tennyson's Idyls of the King.

During the last year of the course a good outline history of English Literature should be carefully studied.

The requirements in English are in harmony with the report of a committee representing the colleges and secondary schools of Iowa. This committee recommends to secondary schools the following course of study in English, the figures indicating the number of recitation periods each week.

First Year

First Semester

Composition and Rhetoric—3
English Classics—2

Second Semester

Composition and Rhetoric—3
English Classics—2

Second Year

Composition and Rhetoric—2
English Classics—3

Composition and Rhetoric—2
English Classics—3

Third Year

Composition and Rhetoric—1
English Classics—4

Composition and Rhetoric—1
English Grammar—4

Fourth Year

Composition and Rhetoric—1
History of English Literature and study of English Classics—4

Composition and Rhetoric—1
History of English Literature and study of English Classics—4

The expression "English Classics" as used in this outline means classics written in English. American literature is of course not excluded.

An extract from the report of the committee follows:

"Although the colleges require but three years' work in

English for admission to the freshman class, the committee strongly recommends that all four-year high schools offer a four-year course in English and that all graduates from these high schools take the entire course. However, in the case of pupils who are especially proficient in English or who are doing more than four years' work in foreign language, the work of the third year may be omitted. Pupils who are preparing for college should be careful to include in their reading all the classics indicated as belonging to the list of readings for entrance to college."

GROUP III—HISTORY, CIVICS, AND ECONOMICS

6. HISTORY—At least two semesters' work should be presented in history. One semester's work in civics will be accepted in partial fulfilment of this requirement. The course of study may be as follows: First semester, History of Greece; second semester, History of Rome; third semester, History of England or History of the United States; fourth semester, History of the United States, or Civil Government.

Instead of the first two semesters' work in history indicated above, which is preferred, the University will accept for the present two semesters' work in general history from some standard text.

7. CIVICS—As indicated in the preceding paragraph at least one semester's work should be presented in civics, sequent, where possible, upon elementary work in the grammar school. This work in civics should preferably follow at least a part of the work in history.

8. ECONOMICS—(a) A half year's work on the principles of political economy as presented in a good standard book will be accepted; or (b) Industrial history and the elements of economic theory studied on the basis of a good standard text-book.

GROUP IV—MATHEMATICS

9. ALGEBRA—The algebra of the high school should comprise a careful study of the following topics; signs and symbols; fundamental operations; factoring (including lowest

common multiple and highest common divisor); fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); ratio and proportion.

Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the formal statement of algebraic problems. The interpretation of algebraic results with their graphical representation should be introduced at the earliest possible stage and constantly emphasized.

Three credits, representing at least one and a half years' work with daily recitation, are required in algebra.

10. GEOMETRY—Plane geometry is required for admission to all courses. Provision is made for teaching solid geometry in the University, but credit will be allowed for the work if satisfactorily completed in the preparatory school.

In the study of geometry the "heuristic" method is recommended (see Hopkin's *Manual of Plane Geometry*; Spencer's *Inventional Geometry*; Campbell's *Observational Geometry*.) Whatever method is used the student should be provided with adequate drawing-instruments and should construct and verify all of his positions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations not only should be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of geometry is not to be overlooked, but the work should be so arranged that it may be of the highest disciplinary value. The language of all geometrical exercises should be exact.

Two credits, representing at least one year's work with daily recitation, are required in plane geometry. A third semester may be devoted to solid geometry.

11. ARITHMETIC—The work in arithmetic should in general be completed in the grammar grades. A half-year's work in arithmetic and algebra may be done with great profit in the high school after the completion of the required work in algebra and geometry. Not only will a general review of the subjects be found beneficial in itself, but the higher point of view now attainable may be taken advantage of in many ways.

In addition to the five credits in algebra and geometry

one credit for advanced work in arithmetic, and one credit for work in bookkeeping (by double entry) will be accepted as part of the elective credits.

It is desirable that the high school work in mathematics be finished not until the end of the course, in order that there may be no break in the continuity of the work in the high school and the University.

GROUP V—SCIENCE

Work in the sciences named below will be accepted in partial fulfilment of the requirements for admission, provided that the student has given to each subject offered not less than the time indicated in the table. The subjects are arranged in order of preference.

- | | |
|----------------------------------|--------------------------|
| 1. Physics, 36 weeks; | 4. Physiology, 18 weeks; |
| 2. Botany, 18 weeks; | 5. Chemistry, 36 weeks; |
| 3. Physical geography, 18 weeks; | 6. Zoology, 18 weeks. |

12. PHYSICS—One full year should be given to the study of physics. Of this time a considerable portion should be devoted to experiments and observations by the pupil. One of the chief aims of the course in physics should be to train students in accurate and impartial observation, and to develop independent judgment rather than to impart knowledge of a large number of facts. Constant use should be made of problems in which the student may apply the mathematics he has already studied. A laboratory, equipped with simple apparatus, is necessary for a satisfactory presentation of the subject and for training of the students.

13. BOTANY—The aim should be to make pupils familiar with the local flora, especially in its economic aspects. The habit of accurately observing and then carefully recording should be established from the first. Probably a carefully kept note book will be found much better than an herbarium. Macbride's *Lessons in Elementary Botany*, or its equivalent, is suggested for the guidance of study in elementary botany.

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

14. **PHYSICAL GEOGRAPHY**—The pupil should gain a knowledge of the simpler facts and principles of the mathematical geography, such as the relations of the members of the solar system, the form and movements of the earth, the phases of the moon, etc.; the atmosphere, the atmospheric phenomena, such as winds, temperature, precipitation, etc., and their causes; the evolution of the land forms, including the modifying agencies and their mode of operation; the ocean, its movements, their causes, their effects upon climate and life; the life of the ocean; the effect of climate and topography on human activity, etc.

The local field should be used for illustration as far as possible. The county reports published by the Iowa Geological Survey will furnish valuable aid in field work. Maps, globes, physiographic models, etc., are indispensable to the efficient teaching of this subject.

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

15. **PHYSIOLOGY**—For preparation in physiology, the method of study should combine certain work of a practical nature with lessons from the text-book. This practical work should embrace the observation of general physiological phenomena through experiments so simple that the pupil can make most of them, supplemented by demonstrations in anatomy and microscopy carefully prepared by the teacher. Expensive apparatus is not only unnecessary for this work, but it is really out of place. Even the microscope should be used only as an occasional accessory to what the pupil may observe with unaided vision. The keeping of notes and sketches, recording clearly and systematically the more important observations, should accompany the course throughout.

In every instance, the student should be made familiar with the more important results of recent years in sanitary science. To this end, the teacher is urged freely to use such material as is contained in Part II of Hough and Sedgwick, *The Human Mechanism and the Sanitation of its Surroundings*.

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations and laboratory exercises per week for half the school year.

16. CHEMISTRY—Facts rather than theories should be emphasized, the distinction between them being made clear. Great care should be taken that the student is not left with the impression that formulas or equations control the phenomena instead of being merely their expression. Laboratory work is essential to an understanding of the subject. The experiments should be simple, and the inferences from them as direct as possible.

No credit will be given for work in this branch in schools which have no laboratory. Chemistry should be omitted from the high school course unless adequate laboratory facilities are available for individual laboratory work, continuing throughout one year.

The minimum time to be devoted to chemistry in order to receive credit must be one year of daily laboratory work.

17. ZOOLOGY—Elementary zoology should deal principally with the easily ascertained facts concerning some few animal forms. It is therefore recommended that the general anatomy and life-histories of some typical groups of animals be made the subject of the study, and that the aim be the acquisition of the habit of correct observation and a definite knowledge concerning a few animals, rather than the learning of classification and a superficial knowledge of the animal kingdom as a whole.

Directions for laboratory work are found in most textbooks. Money for this purpose should be expended in plain but convenient tables, good dissecting microscopes, and a few cheap tools rather than in expensive compound microscopes.

Students should be induced to examine carefully, and to make the most of each specimen. They should be encouraged to ask questions, and to find the answer for themselves as far as practicable.

The minimum time to be devoted to zoology in order to receive credit for admission to the University should be one hour's laboratory work daily for a half year. This should be supplemented by field work and reading under the direction of the teacher.

COURSES OF STUDY

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

Freshman Year

Each Semester

English,	2 hours
French, 5; German, 5; Greek, 5; Latin, 5 or 4,	5 or 4 hours
Elective {	
Mathematics (see note 2), 5 or 4	
History; government and economics,—(one only), 4	
Animal biology; botany; chemistry; zoology,—(one only), 4	
Additional foreign language (see note 3), 4 or 5	
Public speaking, 1	
	8 to 10 hours
	14 to 16 hours
Military drill or physical training (see note 5),	2

Sophomore Year

Each Semester

English,	3 hours
Elective, not more than six hours in one department (see note 4),	11 to 13 hours
	14 to 16 hours
Military drill or physical training (see note 5),	2

Junior and Senior Years

REQUIRED: a major study in some one department, extend-

ing through the two years, and equivalent to at least four hours during each of the four semesters; with the approval of the department in charge of the major, the required study may be extended into an allied department (see note 4); 14 to 16 hours are to be elected.

NOTES

1. For the degree, credits to the number of 124 semester-hours are required, or 120 semester-hours exclusive of credits gained for military drill or physical training.
2. Mathematics is prerequisite to the regular work of physics, and to the advanced work of chemistry and commerce; if it be the purpose later to enter upon any of these studies, mathematics should be elected in the first year.
3. Only one language may be begun in the freshman year.
4. In the entire course, work to the extent of twelve semester-hours must be completed in each of the two groups in which the major study does not fall. For the purposes of this requirement, the several departments of instruction are grouped as follows:

GROUP I	GROUP II	GROUP III
English	Classical archæology	Animal biology
French	Education	Astronomy
German	Fine Arts	Botany
Greek	History	Chemistry
Italian	Philosophy	Geology
Latin	Political Economy	Mathematics
Public speaking	Political science	Physics
Sanskrit	Psychology	Zoology
Scandinavian	Sociology	
Spanish		

5. Instruction in military science and tactics, both theoretical and practical, is required of all male students of the freshman and sophomore classes, and of all unclassified male students during their first and second years, unless such students are specially excused. If such students are excused they are required to register for physical training during the period for which the excuse is granted.

The University requires a physical examination of every student on entrance, without cost to the student. Each student will then be assigned to such physical training as the report of the examination warrants. For the women two years of physical training is required.

SPECIAL COURSES

COURSES IN THE SCHOOL OF POLITICAL AND SOCIAL SCIENCE

To guide students who intend to elect a considerable portion of their undergraduate work in this department, special courses have been arranged, subject to the requirements for the degree of Bachelor of Arts. One of these is given in detail below. For a description of the other courses the student is referred to the separate Announcement of the School of Political and Social Science, which may be obtained upon application.

COURSE IN COMMERCE

First Year

First Semester	Second Semester	hours
English,		2
Foreign language,		4 or 5
Mathematics,		5 or 4
Actual government and Industrial history		4

Second Year

English,		3
Principles of economics	Industrial History or Prin-	
or Industrial history,	3 ciples of economics,	3
Commercial geography and raw materials of commerce,		2
Chemistry,		4
Foreign language, history, or science,		3 or 4

Third Year

Money and banking,	3	Public finance,	3
Corp. finance and acc't'g,	3	Transportation,	3
Statistics,	2	Statistics,	2
Labor problem,	2	Monopoly problem,	2
Language, history, or science,			4 to 6

Fourth Year

Commercial policies,	3	Commercial relations,	3
Contracts,	3	Agency,	2
Bills and notes,	2	Partnership,	2
Taxation,	2	Insurance,	2
Elective,	4 or 5	Comparative state legisla-	
		tion,	3
		Elective,	2 or 3

CLASSICAL COURSE

For students who desire a course largely cultural, and in particular for those who are interested chiefly along literary, historical, or similar lines, this course is suggested. The electives should be chosen as broadly as possible from the different departments; language, history, mathematics, economics, science, fine arts, etc. Persons who expect to teach should also take work in education. The student should take both German and French at some time during the course.

Freshman Year

Each Semester

	hours
English,	2
Greek,	5
Latin,	4 or 5
Elective,	4 or 5

Sophomore Year

English,	3
Greek,	4
Latin,	2 or 3 or 5
Elective,	4 to 7

Junior Year

Psychology, Logic,	3
Elective,	12 or 13

Senior Year

Philosophy,	3
Elective,	12 or 13

For students who wish to specialize in the classics, courses will be arranged according to individual needs.

COURSES FOR TEACHERS

Definite Preparation Necessary

Students expecting to teach should make definite preparation for the work by properly selecting and grouping their University courses. Experience in placing teachers has shown that those who have not made suitable preparation find themselves handicapped in securing positions; and what is more important, in filling them efficiently. Superintendents are making demands for trained teachers, and in the larger cities they will take no others.

The following suggested conditions may readily be fulfilled as a part of the requirements for the degree of Bachelor of Arts.

General Work

Because of the variety of work which every teacher is likely to be required to do upon beginning to teach, and because of the requirements for state certificates, at least elementary courses should be taken in not less than five subjects which are taught in the high schools.

Specialized Work

Each teacher should have special and extended preparation in two or three subjects. Experience has shown that the following combinations are most frequently demanded: Latin, German; English, German; English, History, Civics; English, Latin, History; Mathematics, Physics; Botany, Zoology; Mathematics, Physics, Chemistry; Physics, Chemistry, Botany, Zoology, Physiology, Physiography.

In the larger schools Greek is sometimes given with Latin; and French with German. One teacher is frequently required to teach all the sciences. Public speaking is desirable as a part of the preparation for English.

Professional Education

Professional training is as necessary for the teacher as for the physician, lawyer, or engineer. The best superintend-

ents demand teachers with professional equipment. The minimum taken should include:

Psychology, 6 semester hours.

Education, 12 semester hours.

The psychology should generally precede the work in education. For the present this is not absolutely required. It is also very desirable that a course in biological work should precede the work in education.

Special Certificate

For information concerning special certificate in education see page 79.

REGULAR STUDENTS

. All students, except as provided under UNCLASSIFIED STUDENTS, must follow the course of study outlined above in the order prescribed, carrying not more than sixteen and not less than fourteen hours of lectures or recitations a week, except as required by the program, or permitted by the faculty.

UNCLASSIFIED STUDENTS

1. Persons twenty-one or more years of age, not candidates for a degree, may be admitted as unclassified students without examination, and may pursue studies at the discretion of the faculty on the recommendation of the members of the faculty in charge of the subjects chosen.

2. Students of the professional colleges who are allowed to carry additional work in this college but are not candidates for a degree in this college, will be recorded as "unclassified." If students of either of these classes become candidates for a degree in the College of Liberal Arts, they will be required to furnish evidence, by examination or acceptable certificate, of having completed the preparatory requirements.

3. Persons under twenty-one years of age, not candidates for a degree but admitted to this college without conditions, if their reasons for irregular work are approved by the faculty, may be registered as "unclassified."

4. Unclassified students are subject to the same requirements as regular students as to amount of work to be carried, examinations, and scholarship.

COMBINED LIBERAL ARTS AND PROFESSIONAL COURSES

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. A. IN THE COLLEGE OF LIBERAL ARTS AND TO THE DE- GREE OF LL. B. IN THE COLLEGE OF LAW

Students of the College of Liberal Arts who have fully completed their junior year, and who have satisfied the specific requirements for the degree of Bachelor of Arts, except as here specified, may be enrolled in the College of Law and receive credit for one year's time of law-study while completing their senior year in the College of Liberal Arts, by complying with the following conditions: they must register for ten hours a week in the College of Law in the subjects of the first year, given throughout the year at eight and nine o'clock, and practice court by appointment; and for five hours in the College of Liberal Arts selected from the group of subjects embracing political and social science, including political and institutional history. This privilege is not extended to undergraduates of other colleges who enter the College of Liberal Arts of this University with the rank of senior.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. S. IN THE COLLEGE OF LIBERAL ARTS, AND TO THE DEGREE OF M. D. IN THE COLLEGE OF MEDICINE OR THE COLLEGE OF HOMEOPATHIC MEDICINE

(The requirements for admission to this course are those of the College of Liberal Arts, not of the professional college.)

First Year

Each Semester

	hours
German or French,	5
English,	2
Mathematics,	4
Animal biology,	4

Second Year

English,	3
Physics,	4
Animal biology,	4
Botany or zoology,	4

Third Year

German or French,	3
Chemistry,	6
Human anatomy in the College of Medicine,	4
Human physiology in the College of Medicine,	3

Fourth, Fifth, and Sixth Years

Medical work exclusively.

NOTES

1. The degree of B. S. will be conferred at the end of the fourth year; the degree of M. D., at the end of the sixth year, if the work has been completed.

2. This course must be pursued as outlined here, no substitutions or changes in the order of studies being permitted, except that the English and foreign language may be transposed.

COMBINED COURSE OF SIX YEARS LEADING TO THE DEGREE OF B. S.
IN THE COLLEGE OF LIBERAL ARTS, AND TO THE DEGREE
OF D. D. S. IN THE COLLEGE OF DENTISTRY

(The requirements for admission to this course are those of the College of Liberal Arts, not of the College of Dentistry.)

First Year

Each Semester

German or French,	5
English,	2
Mathematics,	4
Animal biology,	4

Second Year

English,	3
Physics,	4
Animal biology,	4
Botany or zoology,	4

Third Year

German or French,	3
Chemistry,	4
Elective in the College of Liberal Arts,	8

Fourth Year

Chemistry,	3
Human anatomy,	4
Human physiology,	3
Freshman dental laboratory work,	5

Fifth and Sixth Years

Dental work exclusively.

NOTES

1. The degree of B. S. will be conferred at the end of the fourth year; the degree of D. D. S., at the end of the sixth year if the work has been completed. This course must be taken as here outlined, except that the English and foreign language may be transposed.

2. Students of marked ability may shorten this course to five years by taking electives in the College of Liberal Arts during successive Summer Sessions.

BACCALAUREATE DEGREES

For each of the courses of study leading to a bachelor's degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the faculty, the following degrees are conferred:

Bachelor of Arts upon those who complete the four years' course in the arts and sciences.

Bachelor of Science upon those who complete the first four

years of either of the combined courses in medicine, homeopathic medicine and dentistry.

SPECIAL CERTIFICATES

ENGLISH, FRENCH, GERMAN, GREEK, LATIN

Special certificates as to scholarship in English, in French, in German, in Greek, or in Latin will be granted under the authority of the faculty of the College of Liberal Arts on the following conditions:

1. They shall be issued to students of this University on or after graduation only.
2. They shall be in the nature of an authorized guarantee as to scholarship in English, in French, in German, in Greek, or in Latin.
3. They shall be issued only after *at least* three years of full work (to represent *five* hours of lectures and recitations a week or an equivalent) in one of these subjects.
4. Candidates must pass a final examination in the subject in which the certificate is desired.
5. The examination must be conducted by the professor in charge of the subject, assisted by such other instructors as may be agreed upon by him and the President of the University.
6. These certificates will be signed by the President and by the professor immediately concerned.

TEACHERS' CERTIFICATES IN EDUCATION

Students who have completed the following work and who have met the other requirements will be awarded a Teacher's Certificate in Education:

- (1) Twelve semester hours in education, including the courses in the principles of education and in child study.
- (2) Six semester hours in psychology.
- (3) All other requirements for the degree of Bachelor of Arts in the College of Liberal Arts in this University.
- (4) The recommendation by the department of education and the vote of the faculty upon the basis of superior

work, apparent aptitude for teaching and the fulfillment of all other requirements.

NOTE: This certificate may also be awarded to graduate students who complete the work in education and in psychology and who receive the recommendation of the department of education and the vote of the faculty.

STATE CERTIFICATES

According to the state regulations in Iowa, "Graduates of the College of Liberal Arts of the State University who have pursued, in addition to the course in psychology, a pedagogical course of at least one year, will be admitted to the examination (for state certificate) upon filing certified statements given by the president or registrar of their graduation and of their record in the pedagogical course." (Regulations by the Board of Educational Examiners, June, 1905, page 4).

TEACHERS' POSITIONS

The University, through its Teachers' Appointment Committee, will make special efforts to place all adequately equipped teachers. The Head of the Department of Education is Chairman of the Committee on Recommendations. During the past season the University has placed more than a hundred of its graduates in the best high schools and in superintendencies. Nearly as many more might have been placed, had they been available. Very properly, those who have arranged their work with a view to making teaching a profession by preparing definitely to teach certain subjects and by special pedagogical training, may be recommended with more confidence than those whose work has been general and without pedagogical equipment. No persons will be recommended who do not warrant confidence that they will be efficient teachers in the particular positions sought.

COURSES OF INSTRUCTION

NOTE: Additional courses in almost all departments are offered in the Summer Session. The announcement of the Summer Session will be sent on application to the President of the University.

ASTRONOMY

PROFESSOR WELD

The first year of either of the groups (A), (B), (C) in mathematics, or its equivalent, and one of the courses in physics are prerequisite to any of the courses in astronomy. Courses 101 (102) and 103 (104) may be taken either simultaneously or in succession, though the latter will not be given in 1907-1908.

The University is provided with a small but well equipped students' observatory (See page 36.)

*101 (102). GENERAL ASTRONOMY. 3 hrs.

A course of lectures on descriptive astronomy for the general student. This course may be supplemented by course 1 (2) in geology, which is given at the same hour, on Tuesdays and Thursdays.

Monday, Wednesday, and Friday, at 9:00.

May not be given in 1907-1908.

103 (104). PRACTICAL ASTRONOMY. 2 hrs.

The student is taught the use of the sextant, transit in-

**Courses with odd numbers are given in the first semester, those with even numbers in the second semester. Courses with double numbers,—e. g., 19 (20)—run throughout the entire year. The number of periods each week is indicated at the right of the course.*

strument, clock, chronograph, etc.; the arrangement of the *American Ephemeris and Nautical Almanac*; and the general principles of time, latitude, longitude, and azimuth determination. The theory of the equatorial telescope with the position micrometer is also explained and illustrated.

Tuesday and Thursday, at 9:00; supplemented by work at the observatory.

Omitted in 1907-1908.

108. ASTRONOMY AND GEODESY.

A course for engineering students. Special attention will be given to methods of time, longitude, latitude, and azimuth determinations by means of portable instruments.

Monday, Wednesday, and Friday, at 11:30. One or two evening sessions per week during the fourth quarter, in place of the regular forenoon sessions.

BOTANY

PROFESSOR MACBRIDE; PROFESSOR SHIMEK, ASSISTANT
PROFESSOR WYLIE

A. COURSES FOR UNDERGRADUATES

*1. ELEMENTARY PLANT HISTOLOGY. 2 hrs.

An elementary laboratory and lecture course, designed to give the knowledge of plant anatomy necessary for the following course. Professor SHIMEK; Assistant Professor WYLIE.

2. ELEMENTARY PLANT PHYSIOLOGY. 2 hrs.

A laboratory and lecture course dealing with the fundamental physiological processes in plants. Professor SHIMEK.

3 (4). PLANT TAXONOMY. 2 hrs.

The local flora is made the basis of the study of this subject, and special attention is given to the use of reference books in systematic work. Professor SHIMEK.

5 (6). ELEMENTARY PLANT ECOLOGY. 2 hrs.

The problem of the effect of environment upon plants is

*See note at bottom of page 111.

considered in both its general and local aspects. The course consists of lectures, and laboratory and field work. Professor SHIMEK. Combinations of the preceding courses with this are especially recommended to teachers.

6a. ELEMENTARY PLANT ECOLOGY. 4 hrs.

The equivalent of course 5 (6) is offered during the second semester as a four hour course.

7 (8). GENERAL MORPHOLOGY OF PLANTS. 4 hrs.

A course designed to afford a general view of the plant kingdom. A thorough study in laboratory and field of selected types, with lectures on the structure, classification, and relations of the various groups. Two lectures, and two afternoons of two hours each in laboratory. The first semester is devoted to algae, fungi, and bryophytes; the second, to ferns and flowering plants. Assistant Professor WYLIE.

Monday, Tuesday, Wednesday, and Friday.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

9 (10). GENERAL BOTANY. 2 hrs.

A course of popular lectures and special studies intended to illustrate the purpose, method, and scope of present botanical research, the progress of botanical science in recent years, and the general economic importance of the subject. The lectures are illustrated by material from the herbarium and the field, and by stereopticon views, and no effort is spared to give the course the highest practical value. Students taking the course may elect laboratory work, not to exceed four hours (two credit hours) per week. Professor MACBRIDE. Students desiring a combined course in Botany and Zoology, may consult ZOOLOGY 9 (10).

11 (12). MORPHOLOGY OF THE PLANT CELL. 2 hrs.

Laboratory work with lectures and collateral reading. A morphological study of the plant cell in relation to its vegetative and reproductive functions. Methods of plant histology are developed as the work proceeds. Instruction is given in killing, embedding, sectioning, and staining vegetable tissues. These methods find special application in the study of the

plant cell at critical periods, such as sporogenesis, oögenesis, spermatogenesis, etc. Opportunity is offered for the preparation of microscopic slides illustrating representative types of the great groups of plants. This course requires at least four hours a week in the laboratory. Additional work with proportional credit may be arranged for those desiring it. This course may be taken with course 13 (14). Assistant Professor WYLIE.

Tuesday and Thursday.

13 (14). ADVANCED MORPHOLOGY. 2 hrs.

Lectures, laboratory work, and regular use of reference works. A course designed to acquaint the student with a wider range of plant forms, and to develop the important conclusions of morphology. Various theories are discussed, and methods of investigation are developed. At least four hours a week are required in the laboratory. Additional work may be arranged. This course may be taken with course 11 (12). Open only to those who have had course 7 (8) or its equivalent. Assistant Professor WYLIE.

Wednesday and Friday.

15 (16). ADVANCED PLANT ECOLOGY. 3 hrs.

This course consists of a more detailed study of plant societies in the field, and of laboratory investigation of structural adaptations of plants to environment. Open only to students who have had the equivalent of course 5 (6). Professor SHIMEK.

17 (18). EXPERIMENTAL PLANT PHYSIOLOGY. 3 hrs.

This is a course in experimental laboratory and field work, and includes the investigation of the processes of absorption, assimilation and respiration in the green plant, including the attendant phenomena of transpiration, various movements in plants, etc. Open only to those who have had course 1 (2), or an equivalent. Professor SHIMEK.

19. GENERAL MYCOLOGY. 2 hrs.

This is a course in the study of fungi, and consists of laboratory work, supplemented by lectures, experiments, and collateral reading. It is an advanced course. Students make

and classify collections for themselves. In identifying material collected, students are aided by extensive mycologic literature, *exsiccati*, etc. Professor MACBRIDE.

20. PLANT PATHOLOGY.

2 hrs.

A study of the causes of plant diseases and deformities. Special attention is given to pathological organisms, and to external conditions producing pathologic conditions in the plant. Professor MACBRIDE.

21 (22). PALEOBOTANY.

1 hr.

A course of lectures with collateral reading illustrated by material from the botanical collections of the University. Professor MACBRIDE.

Wednesday.

23 (24). SPECIAL SYSTEMATIC WORK.

The large collections in the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE; Professor SHIMEK, according to the group chosen.

Throughout the year as arranged.

25 (26). SPECIAL APPLIED BOTANY.

A course of reading and laboratory study for students of pharmacy and medicine. The official *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin, and relationships. Professor MACBRIDE.

Throughout the year as arranged.

27 (28). ECONOMIC BOTANY.

2 hrs.

A lecture, laboratory, and field course presenting a view of the plant world with reference to economic uses. The principles of forestry, and other economic branches related to botany, are discussed, and special plant products of use to man, such as woods, fibres, etc., are considered. This course is also supplemented by laboratory work. Professor SHIMEK.

29 (30). SEMINARY.

1 hr.

A special course in reading and study of current literature is arranged for such students as have completed at least the

equivalent of 5 (6) and 7 (8) in botany. Students are expected to prepare written reviews and criticisms of the literature presented, to engage in discussion of topics especially assigned, and to carry forward at appropriate seasons special investigations in the field as directed. Professor MACBRIDE; Professor SHIMEK; Assistant Professor WYLIE.

31 (32). THESIS COURSE.

Designed for such students, either graduates or others, as desire to undertake problems of original research. Professor MACBRIDE; Professor SHIMEK; Assistant Professor WYLIE.

Throughout the year as arranged.

D. TECHNICAL COURSES

33. ARBORICULTURE.

5 hrs.

The study of the life-history of a tree; its mode of growth and repair. The effect of environment on trees. The selection planting and treatment of trees for streets, lawns, and parks.

First semester; five hours a week during the first quarter.

34. ARBORICULTURE.

A continuation of course 33. Further treatment of seeds of trees. Methods of seeding, and nursery work. Transplanting and replanting trees. Selection and treatment of trees for wind-breaks, prairie groves, and small wood-lots. Use of nurse trees and methods of thinning applicable to small tracts. Special attention is given to forest conditions in Iowa. Frequent excursions to neighboring prairie groves and timber lots will furnish practical demonstrations of the subjects discussed. Practical tree-plantation work will also be undertaken.

Students in forestry will schedule for two hours during the second semester (one hour during the third quarter, and three hours during the fourth quarter.)

35. SILVICULTURE.

3 hrs.

The perpetuation of the forest. Methods of improving forests. The value and treatment of mixed and pure stands. The determination of the rate of growth. The principles and practices of reforestation. A portion of the course consists of lectures and reading on silviculture in foreign countries.

Tree-plantation work will be continued in connection with this course.

36. FOREST MANAGEMENT. 3 hrs.

The management of forest areas with a view to continued profitable yield. The preparation of working plans for larger forest areas. Each student will prepare a working plan for a selected area. The plan will include maps, estimates of timber, best methods of cutting and handling, subsequent treatment of tract, etc.

37. PARKS. 2 hrs.

A treatment of the park problem from the standpoint both of the engineer and the landscape artist. Professor MACBRIDE; Professor SHIMEK.

38a. FOREST MENSURATION. 5 hrs.

Practical methods employed in the determination of the contents of logs, standing trees, entire stands, etc. Further practice in the determination of the age and rate of growth of trees will be given.

Five hours a week during the third quarter.

39. TIMBER TECHNOLOGY. 2 hrs.

A comparative microscopic study of woods with special reference to quality. A study of the grain, color and other striking characters of wood for purposes of recognition. Attention is also given to causes of decay of wood, and to methods of seasoning and preservation. Professor MACBRIDE; Professor SHIMEK.

40. HISTORY OF FORESTRY. 2 hrs.

A lecture and reading course reviewing the development of forestry in foreign countries, and in the United States.

41. LUMBERING. 2 hrs.

The value of the lumber industry; methods of lumbering practiced in this country. Excursions to mills and lumber camps are taken in connection with the course.

42. FOREST PRODUCTS. 3 hrs.

A discussion of the value of various products of the for-

est, the uses to which they are put, and the manner in which they are obtained and treated. Professor SHIMEK.

43. FOREST PROTECTION.

2 hrs.

The discussion of methods of protecting the forest against fires, parasites, cold winds, and other injurious agencies.

45. FORESTRY IN THE UNITED STATES.

3 hrs.

Former extensive forests, and their destruction by wasteful methods. The physiographic and industrial consequences. The work of the U. S. Bureau of Forestry. The forest policy of the general governments and of the several states. Forestry in the Philippines and Porto Rico. Healthfulness, climatic conditions, etc.

Unless otherwise stated, the technical courses will be given under the direction of Professor SHIMEK. Most of them will be grouped so that they will be offered only in alternate years.

CHEMISTRY

PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE, ASSISTANT PROFESSOR KARSLAKE, MR. POORE, MR. REMINGTON, MR. LONGWORTH

Suggestions as to the proper selection of electives as a preparation for teaching, research, or a profession in which chemistry is one of the fundamental branches, will be given by the head of the department. A four year course in chemistry is outlined in the announcement of the College of Applied Science.

INORGANIC AND GENERAL CHEMISTRY

*1 (2). INORGANIC CHEMISTRY.

4 hrs.

The course extends through the year and consists of lectures, recitations and laboratory work. The lectures are designed not only as a fundamental course for those who intend to specialize in chemistry but also to prepare those who desire to give instruction in the subject in the secondary schools. In

*See note at bottom of page 111.

addition they are planned to serve as a chemical foundation for anyone who wishes to devote himself to other branches of pure or applied science and whose time available for chemistry is limited; they will be illustrated by experiments. The laboratory work gives the student an opportunity to learn chemical manipulation and to study at closer range the more important elements and compounds, and the principal forms of chemical action. The lecture course may be taken in connection with 5 (6). Professor ROCKWOOD; Mr. REMINGTON.

Lectures and recitations, three hours; laboratory once a week.

3 (4). INORGANIC CHEMISTRY. 3 (2) hrs.

This includes as much of the science as is essential for students who are preparing for professional work in which chemistry is a fundamental subject. It is taught by experimental lectures and recitations, but may be accompanied by the laboratory work of course 1 (2). Assistant Professor VON ENDE.

First quarter, three hours; second quarter, two hours, each week. The course is repeated in the second semester.

5 (6). INORGANIC CHEMISTRY. 3 hrs.

The non-metals and metals. A laboratory course. It consists chiefly of experiments, both qualitative and quantitative, illustrating the general principles of chemical processes, together with the preparation and study of the properties of the more important inorganic compounds. The elements of qualitative analysis are also considered. This course is primarily designed for chemists, though other students are eligible. It must be preceded or accompanied by course 1 (2) or its equivalent. Assistant Professor KARSLAKE.

9 (10). GENERAL CHEMISTRY. 3 hrs.

A course of lectures and recitations covering both inorganic and organic chemistry. With this course may be taken the laboratory work of course 1 (2). Mr. POORE.

12b. INORGANIC PREPARATIONS.

A laboratory course continuing course 104a, consisting in the preparation and purification of some of the more impor-

tant inorganic compounds. Prerequisites, elementary inorganic chemistry and qualitative analysis. Mr.——.

Fourth quarter.

31 (32). GENERAL METALLURGY.

3 hrs.

This is designed especially for students of mining engineering but is open to those who are qualified for it. It includes the methods used for the reduction of metals from their ores and is taught by lectures, recitations and laboratory work. Visits to metallurgical works are planned for the vacations. Prerequisites, general inorganic chemistry and qualitative analysis. Mr. LONGWORTH.

34a. SPECIAL METALLURGY.

5 hrs.

A course for students of civil and mechanical engineering, dealing particularly with the metallurgy of iron, steel and copper. Third quarter. Mr. LONGWORTH.

51 (52). INDUSTRIAL CHEMISTRY.

Lectures, conferences and assigned readings on the applications of chemical principles to industrial methods. Throughout the year; two hours. Mr. LONGWORTH.

53 (54). INDUSTRIAL CHEMISTRY.

3 to 6 hrs.

Laboratory Course. This course consists essentially of a series of experiments, both qualitative and quantitative, illustrating the general principles of chemical processes as applied to the preparation and purification of some of the more important inorganic technical products on a scale sufficiently large to determine with considerable accuracy the factors and conditions upon which the economy of the process depends. Prerequisite; elementary inorganic chemistry and qualitative analysis. Mr. LONGWORTH.

First or second quarters.

42. HISTORY OF CHEMICAL THEORIES.

1 hr.

Lectures on the development of chemical theory. Assistant Professor VON ENDE.

ANALYTICAL CHEMISTRY

101 (102). QUALITATIVE ANALYSIS.

6 hrs.

The work is for the most part done in the laboratory al-

though lectures and recitations will be included as may be necessary. The reactions of the bases and acids will be studied, both as they show the nature of chemical compounds and their chemical changes, and as they serve for the identification of such substances. Instruction will be given in the wet methods of analysis and also in analysis by the aid of the blowpipe. Prerequisite, course 1 or its equivalent. Professor ROCKWOOD.

103 (104). QUALITATIVE ANALYSIS. 3 hrs.

Laboratory course. A systematic course in qualitative analysis, including a comparison of the different methods of separation and identification of inorganic substances, both in solution and in the dry condition. The ionic theory and the law of mass action, as applied to the work in this course, are fully discussed. This course must be preceded by 5 (6) and either preceded or accompanied by course 109. This is designed primarily for those taking the Course in Chemistry though others with an equivalent training are eligible. It is continued in course 12b. Assistant Professor KARSLAKE.

First three quarters of the year.

105, 106. ANALYTICAL CHEMISTRY. 2 (3) hrs.

This course may be taken in connection with course 3 (4). It will deal chiefly with the action of the metals and acids as a preliminary to the analysis of the common minerals and ores. Professor ROCKWOOD; Assistant Professor VON ENDE; Mr. REMINGTON; Mr. LONGWORTH.

First quarter, two periods; second quarter, three periods, each week. The course is repeated in the second semester.

107 (108a). QUALITATIVE ANALYSIS. 6 hrs.

A laboratory course. The student learns the methods of chemical manipulation and the use of apparatus, and also becomes acquainted with the action of reagents of the common chemicals upon each other. The course includes the chemical examination of water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. Mr. POORE; Mr. REMINGTON.

First semester, and first half of second semester.

129. THEORY OF ANALYTICAL CHEMISTRY. 1 hr.

Lectures once a week. Prerequisite, inorganic chemistry and qualitative analysis, the latter of which may be taken during the same semester. Assistant Professor VON ENDE.

151 (152). QUANTITATIVE ANALYSIS. 3 to 15 hrs.

Elementary course. A laboratory course in the principles of quantitative analysis, consisting of practice in the gravimetric and the volumetric analysis of the more simple substances together with conferences, discussions and assigned readings. Prerequisite, elementary inorganic chemistry and qualitative analysis. Work in this course may be begun at the beginning of any semester. Though not required it is recommended that this course be preceded or accompanied by course 129. Assistant Professor KARSLAKE.

153 (154). QUANTITATIVE ANALYSIS, Advanced Course. 3 to 15 hrs.

This laboratory course aims to specialize to a considerable extent on the more difficult methods of analysis. The analysis of minerals, alloys etc., will be taken up as circumstances permit. The work is designed to give the student such general training as will enable him to deal intelligently and successfully with analytical problems. Prerequisite, course 151 (152) or its equivalent. The course may be taken up at the opening of any semester. Assistant Professor KARSLAKE.

155 (156). QUANTITATIVE ANALYSIS. Engineering Course. 6 to 10 hrs.

A laboratory course designed to familiarize the engineering student with the most approved methods for the analysis of some of the more important ores and other technical products. Prerequisite, course 105 (106) or its equivalent. As-
OF KARSLAKE.

ELECTRO-CHEMICAL ANALYSIS. 2 hrs.

practicum in the quantitative electrolytic separation of metals. First or second semester; twice a week. Prerequisite, courses 1 (2) or its equivalent, and 252. Assistant Professor VON ENDE.

160. ULTIMATE ORGANIC ANALYSIS. 4 hrs.

This is designed to give the student familiarity with, and practice in, the most approved methods for the quantitative determination of carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus and the other elementary constituents of organic substances. Prerequisite, course 111 (112). Assistant Professor KARSLAKE.

161. WATER ANALYSIS. 3 hrs.

This consists of laboratory work on the qualitative and quantitative determination of the impurities in natural waters. Emphasis is laid upon the interpretation of the results in judging of the potability of the water or its suitability for domestic and technical purposes. Prerequisites, inorganic chemistry and qualitative analysis. Assistant Professor KARSLAKE.

163, 164. FOOD ANALYSIS. 3 to 6 hrs.

A laboratory course in testing foods as to their purity, together with the detection of preservatives, adulterants and substitutes. Prerequisites, as in 161. Professor ROCKWOOD.

First or second semester.

165 (166). TOXICOLOGY. 6 hrs.

A laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating them from foods, clothing, and various complex mixtures. The post mortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, inorganic chemistry and qualitative analysis. Professor ROCKWOOD.

168. ASSAYING. 4 hrs.

A laboratory course on the determination of ore values by fire assaying. Prerequisites, inorganic chemistry, qualitative and quantitative analysis. Mr. ———

108b. VOLUMETRIC ANALYSIS. 6 hrs.

A laboratory course. Volumetric methods of quantitative analysis are of value because of the rapidity and ease with which they can be executed. The principal ones are taught and the student is given enough practice to familiarize him with them. Mr. POORE; Mr. REMINGTON.

Second semester, fourth quarter.

169a. GAS ANALYSIS.**6 hrs.**

A laboratory course dealing with the general methods of gas analysis together with the technical methods for the analysis of illuminating, flue, and producer gas. Mr. REMINGTON.

ORGANIC AND PHYSIOLOGICAL CHEMISTRY**201 (202). ORGANIC CHEMISTRY. Elementary Course. 3 hrs.**

A lecture course, with collateral reading, upon the chemistry of the aliphatic and cyclic compounds. This aims to give the student a good general knowledge of the fundamental principles and theories of organic chemistry and is recommended to those who have a special interest to chemistry, biology, medicine, pharmacy or sanitary engineering. Prerequisite, elementary inorganic chemistry. It is recommended that this course be accompanied by a laboratory course in organic chemistry. Assistant Professor KARSLAKE.

203 (204). ORGANIC CHEMISTRY, Laboratory course. 3 to 9 hrs.

This consists in the preparation of a series of typical compounds of carbon together with a study of their properties, etc., in such a way as to give familiarity with the most important synthetical methods. Prerequisite, course 201 (202). Assistant Professor KARSLAKE.

205 (206). ORGANIC CHEMISTRY, Advanced course. 6 to 18 hrs.

This is chiefly a laboratory course dealing with a study of some of the more difficult synthetical methods and the preparation of some of the more complex organic compounds. Assigned readings and references to original articles on the special topics studied will constitute an important part of the course. It is open to graduate students and may be taken as part of their major or minor work for an advanced degree. Prerequisites, a reading knowledge of French and German, and courses 201 (202) and 203 (204). Assistant Professor KARSLAKE.

227 (228). PHYSIOLOGICAL CHEMISTRY.**2 hrs.**

Lectures and recitations. The course includes the study of the constituents of the animal body together with the chemical changes occurring in the vital processes, also the secre-

tions and excretions of the body. Prerequisites, inorganic and organic chemistry. Professor ROCKWOOD.

229 (230). PRACTICAL PHYSIOLOGICAL CHEMISTRY. 2 to 6 hrs.

A laboratory course treating the same subjects as the preceding. Prerequisite, general chemistry. Physiology is helpful but not essential. Professor ROCKWOOD; Mr. POORE.

231 (232). ADVANCED PHYSIOLOGICAL CHEMISTRY. 6 to 10 hrs.

This is planned for those who wish to continue the work of the preceding courses. The methods used in research for the isolation and quantitative determination of some of the body constituents are studied in the laboratory. It may be taken as a minor for an advanced degree. Prerequisite, 207 (208) and 209 (210). Professor ROCKWOOD.

PHYSICAL CHEMISTRY

251. THEORETICAL AND PHYSICAL CHEMISTRY. 2 hrs.

Lectures, covering chemical statics and dynamics, thermo and electro-chemistry. Assistant Professor VON ENDE.

252. ELECTRO-CHEMISTRY.

Lectures three times a week and practicum once a week. Assistant Professor VON ENDE.

253 (254). THEORETICAL AND PHYSICAL CHEMISTRY.

Laboratory course. Courses 251 and 253 or 252 and 254 may be taken simultaneously or independently. They must be preceded by at least courses 1 and 2, and by the first two in physics, or their equivalent. Laboratory practicum once or twice a week. Assistant Professor VON ENDE.

255. APPLIED ELECTRO-CHEMISTRY. 1 hr.

Lectures on the application of electro-chemical methods in the arts. Prerequisites, courses 1 (2) or 3 and 252. Assistant Professor VON ENDE.

257, 258. ELECTRO-CHEMICAL PREPARATIONS. 2 hrs.

Laboratory practicum in the preparation of chemical substances by electrical methods. Prerequisites, courses 1 (2) or 3 and 252. Assistant Professor VON ENDE.

First or second semester.

259, 260. SELECTED CHAPTERS FROM PHYSICAL AND ELECTRO-CHEMISTRY. 1 hr.

Lectures once a week; first or second semester. Prerequisites, courses 251 and 252. Assistant Professor VON ENDE.

281 (282). CHEMICAL SEMINAR.

This will be held once each week during the year and will be participated in by the instructors and graduate students of the department. Others who have done sufficient chemical work may be admitted with the permission of the head of the department. The primary aim will be to familiarize the student with the original sources of chemical knowledge, especially those found in current literature. This will be done by the preparation of papers and reports, with their discussion and criticism. Professor ROCKWOOD.

291, 292. CHEMICAL RESEARCH. 2 hrs.

This can be carried on by students who have had the essential preliminary work which includes a reading knowledge of French and German.

Courses are offered in:

Physiological and Sanitary Chemistry. Professor ROCKWOOD.

Physical Chemistry. Assistant Professor VON ENDE.

Organic Chemistry. Assistant Professor KARSLAKE

Prerequisites, courses 1 (2) or 3 and 68.

CLASSICAL ARCHAEOLOGY

PROFESSOR WELLER; ASSISTANT PROFESSOR WASHBURN

The following courses do not require a knowledge of Greek:

B. COURSES FOR UNDERGRADUATES AND GRADUATES

***1 (2). GREEK LIFE. 2 hrs.**

Lectures illustrated with lantern slides, photographs, books on art, casts, etc., with collateral reading (in English; references are given also to the important works in German

*See note at bottom of page 111.

and French for those who can use these languages). The topics treated are: the land and the people; houses, dress, and mode of life; marriage and funeral customs; markets and trade; duties of citizens in peace and war, etc. A rapid survey is given also of Athenian topography. Professor WELLER.

Omitted in 1907-1908.

3 (4). ROMAN LIFE.

2 hrs.

This course follows the same lines as 1 (2). It may well be preceded or accompanied by Latin courses 11 (12) and 22. Professor WELLER.

Tuesday and Thursday, at 11:00.

5 (6). GREEK VASE PAINTING.

1 hr.

A study of Greek ceramics. Lectures, illustrated with lantern slides, photographs, and books on art, with collateral reading and investigation of assigned topics; special attention is given to the interpretation of scenes from Greek mythology and life depicted on the vases. Professor WELLER.

Thursday, at 2:30.

7 (8). GREEK THEATER.

1 hr.

An historical and archæological study of the ancient Greek theater.

Omitted in 1907-1908.

9. HISTORY OF ANCIENT ART—see FINE ARTS 3.

Assistant Professor WASHBURN

11. ANCIENT ARCHITECTURE—see FINE ARTS 11.

Assistant Professor WASHBURN

C. COURSES PRIMARILY FOR GRADUATES

13 (14). TOPOGRAPHY AND ANTIQUITIES OF GREECE. 2 hrs.

A study of the topography and antiquities of the principal sites of Greece—Athens, Eleusis, Corinth, Olympia, Delphi, etc.—based on Frazer's *Pausanias's Description of Greece*. Professor WELLER; Assistant Professor WASHBURN.

Tuesday, at 1:30-3:20.

15 (16). ROMAN TOPOGRAPHY AND ANTIQUITIES.

This course follows the same lines as 13 (14). Such sites

are studied as Rome, Pompeii, Pæstum, etc. Professor WEL-
LER; Assistant Professor WASHBURN.

Omitted in 1907-1908.

For courses in Mediæval and Renaissance archæology see
FINE ARTS.

EDUCATION

PROFESSOR BOLTON; PROFESSOR ENSIGN, ASSISTANT PROFES-
SOR DORCAS, SUPERINTENDENT MCCONNELL, DR. BUF-
FUM, MR. McDONALD, MR. SMITH

Course 1 (2) is the most desirable as a first course in education. Certain other courses may well be taken at the same time. After course 1 (2) the order is not important. Courses 1 (2) and 5 (6), or 1 (2) and 13 (14) make a good five hour combination. Courses 1 (2), 9 (10), 12, and 13 (14) are especially desirable for normal school graduates and are in no sense a duplication of work done in the normal schools. Advanced courses are also open to those qualified. Some seminary work is especially valuable for such students.

Some work in psychology and in biology is very desirable in preparation for the courses in education. Students expecting to do considerable work in education can profitably take psychology in the sophomore year, and then distribute the work in education through the junior and senior years.

For SUGGESTED COURSES FOR TEACHERS, and TEACHERS' CERTIFICATES, see pages 74 and 79.

*1 (2). PRINCIPLES OF EDUCATION. 3 hrs.

The meaning of education considered from the standpoint of (1) psychology, (2) neurology, (3) biology, (4) anthropology, (5) sociology. Mental development as affected by heredity and environment, the education of the nervous system, mental hygiene; educational aspects of habit, association, memory, imagination, apperception, instinct, sensory training, motor training, observation, feeling, volition, suggestion and imitation. Varieties of education and varying ideals,

*See note at bottom of page 111.

educational means, educational values. Theories maintained by classical writers on education, such as Plato, Comenius, Pestalozzi, Froebel, and Herbart; contemporary writers as Hall, Harris, Rein, Dewey, etc. A study of such questions as the culture epochs, concentration, correlation, nascent periods, etc. Application of the foregoing to the making of courses of study and to teaching.

Professor BOLTON, Monday, Wednesday, and Friday, at 10:00; Assistant Professor DORCAS, Monday, Wednesday, and Friday, at 9:00.

3 (4). OBSERVATION.

2 hrs.

Students will make a series of observations in the city schools and in the freshmen classes in the University. The results of these observations will be reported in written and oral discussions. Several students each year have opportunity to teach under skilled supervision. Many students have taught before coming to the University. A large number have had one or more years of experience in teaching before graduation. A course of reading is carried on in connection with the observation. The work is so arranged that students may begin with either the first or the second semester. In charge of Assistant Professor DORCAS with frequent consultations with Professor BOLTON and others.

5 (6). METHODOLOGY AND TECHNIQUE OF INSTRUCTION. 2 hrs.

A careful study of the fundamental principles of methodology of teaching, together with demonstrations of library and laboratory accessories. The major part of the time will be devoted to high school subjects, though the relation of elementary to higher instruction will be considered. Designed to be thoroughly practical. Members of the faculty from several other departments frequently contribute lectures on the teaching of their own subjects in the high school. During the past, the heads of the departments of English, history, political science, botany, and mathematics, have given such special lectures. Similar lectures may be expected again. Through the kindness of school officials, students will be permitted to visit the city schools to observe methods and school organization.

tant inorganic compounds. Prerequisites, elementary inorganic chemistry and qualitative analysis. Mr.——.

Fourth quarter.

31 (32). GENERAL METALLURGY. 3 hrs.

This is designed especially for students of mining engineering but is open to those who are qualified for it. It includes the methods used for the reduction of metals from their ores and is taught by lectures, recitations and laboratory work. Visits to metallurgical works are planned for the vacations. Prerequisites, general inorganic chemistry and qualitative analysis. Mr. LONGWORTH.

34a. SPECIAL METALLURGY. 5 hrs.

A course for students of civil and mechanical engineering, dealing particularly with the metallurgy of iron, steel and copper. Third quarter. Mr. LONGWORTH.

51 (52). INDUSTRIAL CHEMISTRY.

Lectures, conferences and assigned readings on the applications of chemical principles to industrial methods. Throughout the year; two hours. Mr. LONGWORTH.

53 (54). INDUSTRIAL CHEMISTRY. 3 to 6 hrs.

Laboratory Course. This course consists essentially of a series of experiments, both qualitative and quantitative, illustrating the general principles of chemical processes as applied to the preparation and purification of some of the more important inorganic technical products on a scale sufficiently large to determine with considerable accuracy the factors and conditions upon which the economy of the process depends. Prerequisite; elementary inorganic chemistry and qualitative analysis. Mr. LONGWORTH.

First or second quarters.

42. HISTORY OF CHEMICAL THEORIES. 1 hr.

Lectures on the development of chemical theory. Assistant Professor VON ENDE.

ANALYTICAL CHEMISTRY

101 (102). QUALITATIVE ANALYSIS. 6 hrs.

The work is for the most part done in the laboratory al-

though lectures and recitations will be included as may be necessary. The reactions of the bases and acids will be studied, both as they show the nature of chemical compounds and their chemical changes, and as they serve for the identification of such substances. Instruction will be given in the wet methods of analysis and also in analysis by the aid of the blowpipe. Prerequisite, course 1 or its equivalent. Professor ROCKWOOD.

103 (104). QUALITATIVE ANALYSIS. 3 hrs.

Laboratory course. A systematic course in qualitative analysis, including a comparison of the different methods of separation and identification of inorganic substances, both in solution and in the dry condition. The ionic theory and the law of mass action, as applied to the work in this course, are fully discussed. This course must be preceded by 5 (6) and either preceded or accompanied by course 109. This is designed primarily for those taking the Course in Chemistry though others with an equivalent training are eligible. It is continued in course 12b. Assistant Professor KARSLAKE.

First three quarters of the year.

105, 106. ANALYTICAL CHEMISTRY. 2 (3) hrs.

This course may be taken in connection with course 3 (4). It will deal chiefly with the action of the metals and acids as a preliminary to the analysis of the common minerals and ores. Professor ROCKWOOD; Assistant Professor VON ENDE; Mr. REMINGTON; Mr. LONGWORTH.

First quarter, two periods; second quarter, three periods, each week. The course is repeated in the second semester.

107 (108a). QUALITATIVE ANALYSIS. 6 hrs.

A laboratory course. The student learns the methods of chemical manipulation and the use of apparatus, and also becomes acquainted with the action of reagents of the common chemicals upon each other. The course includes the chemical examination of water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. Mr. POORE; Mr. REMINGTON.

First semester, and first half of second semester.

129. THEORY OF ANALYTICAL CHEMISTRY. 1 hr.

Lectures once a week. Prerequisite, inorganic chemistry and qualitative analysis, the latter of which may be taken during the same semester. Assistant Professor VON ENDE.

151 (152). QUANTITATIVE ANALYSIS. 3 to 15 hrs.

Elementary course. A laboratory course in the principles of quantitative analysis, consisting of practice in the gravimetric and the volumetric analysis of the more simple substances together with conferences, discussions and assigned readings. Prerequisite, elementary inorganic chemistry and qualitative analysis. Work in this course may be begun at the beginning of any semester. Though not required it is recommended that this course be preceded or accompanied by course 129. Assistant Professor KARSLAKE.

153 (154). QUANTITATIVE ANALYSIS, Advanced Course. 3 to 15 hrs.

This laboratory course aims to specialize to a considerable extent on the more difficult methods of analysis. The analysis of minerals, alloys etc., will be taken up as circumstances permit. The work is designed to give the student such general training as will enable him to deal intelligently and successfully with analytical problems. Prerequisite, course 151 (152) or its equivalent. The course may be taken up at the opening of any semester. Assistant Professor KARSLAKE

155 (156). QUANTITATIVE ANALYSIS. Engineering Course. 6 to 10 hrs.

A laboratory course designed to familiarize the engineering student with the most approved methods for the analysis of some of the more important ores and other technical products. Prerequisite, course 105 (106) or its equivalent. Assistant Professor KARSLAKE.

157, 158. ELECTRO-CHEMICAL ANALYSIS. 2 hrs.

Laboratory practicum in the quantitative electrolytic separation of the metals. First or second semester; twice a week. Prerequisites, courses 1 (2) or its equivalent, and 252. Assistant Professor VON ENDE.

160. ULTIMATE ORGANIC ANALYSIS.**4 hrs.**

This is designed to give the student familiarity with, and practice in, the most approved methods for the quantitative determination of carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus and the other elementary constituents of organic substances. Prerequisite, course 111 (112). Assistant Professor KARSLAKE.

161. WATER ANALYSIS.**3 hrs.**

This consists of laboratory work on the qualitative and quantitative determination of the impurities in natural waters. Emphasis is laid upon the interpretation of the results in judging of the potability of the water or its suitability for domestic and technical purposes. Prerequisites, inorganic chemistry and qualitative analysis. Assistant Professor KARSLAKE.

163, 164. FOOD ANALYSIS.**3 to 6 hrs.**

A laboratory course in testing foods as to their purity, together with the detection of preservatives, adulterants and substitutes. Prerequisites, as in 161. Professor ROCKWOOD.

First or second semester.

165 (166). TOXICOLOGY.**6 hrs.**

A laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating them from foods, clothing, and various complex mixtures. The post mortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, inorganic chemistry and qualitative analysis. Professor ROCKWOOD.

168. ASSAYING.**4 hrs.**

A laboratory course on the determination of ore values by fire assaying. Prerequisites, inorganic chemistry, qualitative and quantitative analysis. Mr. ———

108b. VOLUMETRIC ANALYSIS.**6 hrs.**

A laboratory course. Volumetric methods of quantitative analysis are of value because of the rapidity and ease with which they can be executed. The principal ones are taught and the student is given enough practice to familiarize him with them. Mr. POORE; Mr. REMINGTON.

Second semester, fourth quarter.

regular courses of instruction in the science and art of education:

1. The inspection of affiliated high schools.
2. A bureau of information concerning teachers' positions. For conditions under which recommendations may be given, see under **TEACHERS' POSITIONS**.

ENGLISH

**PROFESSOR ANSLEY; PROFESSOR GORDON, PROFESSOR FLOM,
MR. PIPER, MR. SLOAN, MR. HUNT, MISS CHAWNER,
MISS RIGBY, MISS JEPSON, MRS. VOLLAND, MR.
FICKE, MISS JACOBS**

Unless by special arrangement at the beginning, credit in any course is given only upon satisfactory completion of that course. This rule applies to courses which continue through the year as well as to semester courses.

Special certificates of scholarship in English are granted upon conditions explained under the heading "Teachers' Certificates." Information as to acceptable combinations of courses is given upon request.

(1) COMPOSITION AND RHETORIC

***1 (2). CONSTRUCTIVE RHETORIC. 2 hrs.**

Practice in the construction of effective English prose, with observation of the principles involved. Required of all first year students in the College of Liberal Arts. Nine divisions begin with the first semester and one division begins with the second semester. Mr. PIPER, Miss CHAWNER, Miss RIGBY, Mrs. VOLLAND.

101(102). RHETORIC. 2 hrs.

A course in the essentials of English composition with practice in their application. For first year students in the College of Applied Science. Five divisions. Mr. SLOAN.

121 (122). COMPOSITION. 1 hr.

Practice in descriptive and expository writing. For sec-

*See note at bottom of page 111.

and year students in the College of Applied Science. Three divisions. Mr. PIPER.

131 (132). COMPOSITION. 1 hr.

Practice in descriptive and expository writing. For third year students in the College of Applied Science. Mr. SLOAN.

141 (142). COMPOSITION. 1 hr.

Practice in descriptive and expository writing. For fourth year students in the College of Applied Science. Mr. PIPER.

3 (4). THE ESSAY. 2 hrs.

Practice in expository writing and in criticism of essays. Open to students who have completed course 1 (2). Mr. PIPER.

Omitted in 1907-1908.

5 (6). ARGUMENTATION. 2 hrs.

A course in argumentative composition, based on Baker's *Principles of Argumentation*. Open to students who have completed course 1 (2). Mr. SLOAN.

Omitted in 1907-1908.

7 (8). THE SHORT STORY. 2 hrs.

A course in narrative and descriptive prose and the art of modern prose fiction, the short story being the form selected for discussion and practice. Admission by consent of the instructor. Mr. HUNT.

9 (10). POETICS. 2 hrs.

Studies in the forms of English verse. Mr. PIPER.

Omitted in 1907-1908.

11 (12). COMPOSITION. 1 hr. or more.

Practice in writing English, for students who have completed course 3, 7, or 9. Assignments are adapted to individual needs, two conference periods weekly taking the place of class exercises. Registration, which is by consent of the instructor, may be for one hour or more of credit. Professor ANSLEY.

15. THE NEWSPAPER. 1 hr.

Lectures upon some details in the work of newspaper making, with practice in writing for the press. What news

is, and how it should be put in form for publication; the writing of editorials; the review of books and the drama; proof reading; the business department. Mr. BREWER.

Wednesday, 3:30-5:00. One hour's credit.

16. THE BOOK.

1 hr.

The making and the care of books; manuscripts and early libraries; the invention of movable types; the work of the best printers, from Gutenberg to William Morris; modern methods in printing and publishing. Mr. BREWER.

Wednesday, 3:30-5:00. One hour's credit.

(2) LITERATURE

21(22). ENGLISH LITERATURE.

3 hrs.

Studies in English literature from Chaucer to Browning. The work of students is commonly presented in writing, and attention is given to form as well as substance. Required of all second year students in the College of Liberal Arts. Five divisions. Mr. HUNT; Miss CHAWNER.

23. THE HISTORY OF ENGLISH LITERATURE.

4 hrs.

A survey of English literature from Chaucer to Shakespeare, with readings in representative verse and prose. The beginnings of English rhymed and blank verse. The development of the English drama. Professor ANSLEY.

Monday, Tuesday, Wednesday, and Thursday, at 9:00.

Omitted in 1907-1908; offered in 1908-1909.

24. THE HISTORY OF ENGLISH LITERATURE.

4 hrs.

A survey of English literature from Shakespeare to Pope, with readings in Milton, Dryden, and other writers in verse and in prose. The decline of the drama. Puritans and Cavaliers. The beginnings of periodical literature. The rise of classicism. Professor ANSLEY.

Monday, Tuesday, Wednesday, and Thursday, at 9:00.

Omitted in 1907-1908; offered in 1908-1909.

25. THE HISTORY OF ENGLISH LITERATURE.

4 hrs.

Lectures on English literature from Pope to Shelley, with readings in Johnson, Goldsmith, Gray, Wordsworth, Coleridge,

Byron, Shelley, Keats, Scott, and other writers in verse and in prose. The decline of classicism; the romantic movement. Professor ANSLEY.

Monday, Tuesday, Wednesday, and Thursday, at 9:00.

Offered in 1907-1908; omitted in 1908-1909.

26. THE HISTORY OF ENGLISH LITERATURE. 4 hrs.

Lectures on Browning, Tennyson, Ruskin, Matthew Arnold, and other writers of the Victorian period, with assigned readings. Professor ANSLEY.

Monday, Tuesday, Wednesday, and Thursday, at 9:00.

Offered in 1907-1908; omitted in 1908-1909.

29. THE ENGLISH DRAMA. 3 hrs.

A study of the history and development of the English drama from the miracle plays to Shakespeare. Consideration of the miracle plays, the moralities, early comedies and tragedies, and the beginnings of the romantic drama. Studies in Lyly, Kyd, Greene, Peele, Marlowe, and others. Open to students who have completed course 21 (22). Mr. PIPER.

30. THE ENGLISH DRAMA. 3 hrs.

A study of the history and development of the English drama from Shakespeare to the closing of the theatres in 1642. The culmination and decline of comedy and tragedy. Studies in Shakespeare, Jonson, Beaumont and Fletcher, Webster, and others. Open to students who have completed course 21 (22). Mr. PIPER.

31 (32). SHAKESPEARE. 2 hrs.

A study of ten plays of Shakespeare—histories, comedies, and tragedies. Mr. HUNT.

42. ENGLISH AND SCOTTISH BALLADS. 2 hrs.

Lectures on the history, the nature and the influence of ballad poetry, with reading and interpretation of selected ballads. Professor FLOM.

Omitted in 1907-1908; offered in 1908-1909.

45. EIGHTEENTH CENTURY ESSAY. 2 hrs.

Studies in the work of Addison, Steele, Johnson, Goldsmith, and others. Open to students who have completed course 1 (2). Mr. SLOAN.

46. NINETEENTH CENTURY ESSAY. 2 hrs.

Studies in the work of Macaulay, De Quincey, Carlyle, Newman, and others. Open to students who have completed course 1 (2). Mr. SLOAN.

47. THE NOVEL. 2 hrs.

Studies in English novelists of the eighteenth century: Defoe, Richardson, Fielding, Smollett, and others. Mr. SLOAN.

48. THE NOVEL. 2 hrs.

Studies in the English novelists of the nineteenth century: Scott, Dickens, Thackeray, George Eliot, and others. Mr. SLOAN.

49 (50). THE ARTHURIAN LEGEND. 2 hrs.

A course in the literary development of the legends of King Arthur and the Knights of the Round Table. Mr. FICKE.

Omitted in 1907-1908.

61. AMERICAN LITERATURE. 3 hrs.

A survey of American literature from the colonial beginnings to the civil war. Irving, Cooper, Bryant, and Poe are studied, and the growth of sectional literatures is traced in lectures and readings. Miss CHAWNER.

62. AMERICAN LITERATURE. 3 hrs.

The development of national American literature since the civil war. Studies in Whittier, Longfellow, Whitman, Lanier, and other poets, in the essays of Lowell, Holmes, and Stedman, and in representative novelists. Miss CHAWNER.

65 (66). CRITICISM. 2 hrs.

Studies in the theory of literary criticism. Professor ANSLEY.

Tuesday and Thursday, at 10:00.

[Related work is offered in course 16 in the Department of Philosophy.]

67 (68). THE TEACHING OF ENGLISH. 2 hrs.

The English course in secondary schools, the subjects it includes, and ways of presenting them. Professor ANSLEY.

Omitted in 1907-1908; offered in 1908-1909.

[Related work is offered in course 5 (6) in the Department of Education.]

(3) PHILOLOGY

71 (72). OLD ENGLISH. 3 hrs.

An introduction to the language and the literature of the Old English period, with readings in Widsith, Beowulf, the Chronicle, and the writings of Cynewulf, Aelfred, and Aelfric. Professor ANSLEY.

Monday, Wednesday, and Friday, at 10:00.

73 (74). MIDDLE ENGLISH. 2 hrs.

An introduction to Middle English. Emerson's *Middle English Reader* is used in the first semester. This is followed by a study of Langland's *Piers the Plowman* and selected Tales from Chaucer. Professor FLOM.

75. HISTORICAL ENGLISH GRAMMAR. 2 hrs.

A lecture course intended for students who expect to teach and for others interested in the language. Modern English word-forms and constructions are explained historically, and the sources of the vocabulary and of modern spelling are identified. The course need not be preceded by courses in Old or Middle English. Professor FLOM.

Tuesday and Thursday, at 10:00.

76. THE HISTORY OF THE ENGLISH LANGUAGE. 3 hrs.

An advanced course for students who have completed courses in Old and Middle English. A brief survey of the development of the language is followed by investigation of special problems. Professor FLOM.

81 (82). ADVANCED OLD ENGLISH. 2 hrs.

In this course Beowulf is read and the chief problems in Beowulf criticism are considered: the growth of the epic and its present form; its historical and mythical elements; its original home. This course must be preceded by course 71 (72). Professor FLOM.

91. GOTHIC. 3 hrs.

An introduction to the Gothic language, with special reference to its relations to English and German. Professor FLOM.

(4) PUBLIC SPEAKING

The courses in this subject naturally divide themselves into two lines of work; one looking to debate or oratory as an end, and the other to the interpretation of literature. Most of the courses offered are cultural in character; but courses 211 (212), 213 (214), 215 (216) are somewhat technical and students desiring to take them must have the permission of the instructor.

***201 (202). PUBLIC SPEAKING AS AN ART. 2 hrs.**

This course is general, seeking to prepare the student for any line of public speaking work which he may desire to undertake. Miss JEPSON; Miss JACOBS.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

203 (204). LITERARY INTERPRETATION. 2 hrs.

Literary forms are studied in their relation to public speaking. Students taking this course are advised to take English 21 (22). Professor GORDON.

205 (206). PUBLIC ADDRESS. 3 hrs.

The nature and presentation of argument, based upon Baker's "Principles of Argumentation." Open to students who have completed English 1 (2). Professor GORDON.

207 (208). DEBATE. 2 hrs.

A practical debate course, based upon the study of masterpieces in argument. Open to students who have completed English 1 (2). Professor GORDON.

209. ORATORY. 2 hrs.

A practical course in the writing and presentation of an oration. Students intending to enter for the Northern Oratorical League contest are advised to take this course. Professor GORDON.

210. ORATORY. 2 hrs.

This is a repetition of course 209 and is recommended for

*See note at bottom of page 111.

students desiring to enter for the Hamilton Club Oratorical Contest. Professor GORDON.

211 (212). INTERPRETATION OF THE DRAMA. 2 hrs.

A practical study of dramatic interpretation. Students in this course are advised to take English 31 (32). Miss JEPSON.

213 (214). SHAKESPEARE. 2 hrs.

A practical course in the study of the presentation of the plays of Shakespeare. Students are advised to take English 31 (32). Miss JEPSON.

215. DEBATE AND ORATORY.

This course is designed to furnish individual help in connection with the study and presentation of special topics in debating and oratorical contests. Students are advised to take Economics 23 (24). Professor GORDON.

Hours to be arranged.

216. DEBATE AND ORATORY.

Identical with course 215 and arranged for the second semester.

Hours to be arranged.

217. EXTEMPORE SPEAKING. 2 hrs.

A practical course in the development of the forms of discourse in public speaking. Professor GORDON.

218. EXTEMPORE SPEAKING. 2 hrs.

Identical with course 217 and arranged for the second semester.

219. VOCAL EXPRESSION. 2 hrs.

Practical work in literary interpretation is offered. Open only to women. Miss JEPSON.

220. VOCAL EXPRESSION. 2 hrs.

Identical with course 219 and arranged for the second semester.

C. COURSES PRIMARILY FOR GRADUATES

251 (252). HISTORY AND ORATORY.

For research work by graduate students. Professor GORDON.

DEBATE AND ORATORY

The Forensic League, composed of the Zetagathian Society, the Irving Institute, the Philomathian Society, and the Marshall Law Society, carries on systematic training in debate and oratory through practice and public contests. The Central Debating League of America, composed of five state universities—Illinois, Iowa, Minnesota, Nebraska, and Wisconsin—furnishes two annual contests. The debates in 1907-1908 will be held with Illinois at Urbana and with Nebraska at Lincoln. These debates occur on Friday, December 20. The preliminary contest takes place Friday, October 11. These contests are open to any student of the University. The Honorable Frank O. Lowden offers three prizes, of twenty-five, fifteen, and ten dollars, respectively, to the winners in the preliminary. The representatives of the University in the final contests are given appropriate gifts marked with the initial "I".

The Northern Oratorical League, composed of Iowa, Michigan, Minnesota, Chicago, and Northwestern Universities and Oberlin College, has an annual contest the first Friday in May. The contest for the year 1907-1908, occurs at Iowa City. The Preliminary for this important contest occurs January 24, 1908. The Honorable Frank O. Lowden has established a fund in connection with this League which yields two prizes, one hundred dollars and fifty dollars respectively. A prize of twenty-five dollars is given to the winner of the preliminary contest.

The Hamilton Club (Chicago) Oratorical Contest, open to Chicago, Northwestern, Michigan, Minnesota, Illinois, Indiana, Iowa and Wisconsin Universities and Knox College, has an annual contest on January 11 in Chicago. The preliminary occurs in the preceding year May the 24th. A prize of twenty-five dollars is given in the preliminary contest, and two prizes of one hundred dollars and fifty dollars respectively, in the final contest.

Messrs. Otto Brackett, E. K. Brown, E. J. Shannahan, and H. G. Walker have established a prize of twenty dollars, to be competed for by first year students in all colleges.

Mr. George W. Egan has established a similar prize for second year students in all colleges.

The work in Public Speaking has been arranged to accommodate students taking up such work as the above. Credit may be had for the work when the student properly registers.

THE FINE ARTS

ASSISTANT PROFESSOR WASHBURN

***1 (2). THE FINE ARTS. 1 hr.**

A general survey of the principles and laws of artistic expression, with some account of its historical development. The course is designed especially for teachers and for others who desire a general knowledge of the subject, and it may be taken as an introduction by those who desire to pursue special work in the fine arts.

Thursday, at 3:30.

3. HISTORY OF ANCIENT ART. 3 hrs.

Architecture, sculpture, painting, and minor arts in Egypt, Assyria, Persia, Greece, and Rome. Special study is made of Greek sculpture. Lectures, with collateral reading, conferences, and reports.

Monday, Wednesday, and Friday, at 9:00.

4. FINE ARTS OF THE MIDDLE AGES, THE RENAISSANCE AND MODERN TIMES. 3 hrs.

The course consists chiefly of lectures on the principles and development of the fine arts from early Christian times to our own day. Special attention is given to social, political, and religious forces in their relation to the subject.

Monday, Wednesday, and Friday, at 9:00.

7 (8). PRINCIPLES OF DRAWING AND PAINTING. 3 hrs.

An elementary course. Practice in drawing and in the use of water-colors. Lectures. Perspective.

Monday, Wednesday, and Friday, 1:30 to 3:20.

*See note at bottom of page 111.

9 (10). DRAWING AND PAINTING. 3 hrs.

An advanced course, open to those who satisfy the instructor of their fitness to pursue it.

Monday, Wednesday, and Friday, 1:30 to 3:20.

11. ARCHITECTURE. 3 hrs.

Technical and historical development of the ancient styles. The development of forms and technical processes in the architecture of ancient Egypt, Assyria, Persia, Greece, and Rome. Special study is made of the structural and æsthetic principles of Classic Greek and Roman architecture.

Tuesday, Wednesday, and Thursday, at 10:00.

12a. ARCHITECTURE. 3 hrs.

Technical and historical development of Mediæval architecture; vault construction; the origin and structural progress of Gothic.

Third quarter; Tuesday, Wednesday, and Thursday, at 10:00.

12b. ARCHITECTURE. 3 hrs.

Technical and historical development of Renaissance and Modern architecture.

Fourth quarter; Tuesday, Wednesday, and Thursday, at 10:00.

15 (16). ARCHITECTURAL DRAWING.

Practice in the principles of architectural drawing, with a study of forms used in composition; the orders.

Omitted in 1907-1908.

For courses in *Greek Vase Painting*, *Topography and Antiquities of Greece*, and *Topography and Antiquities of Rome*, see CLASSICAL ARCHÆOLOGY.

For course in *Æsthetics*, see PHILOSOPHY.

For course in Architecture and Building Construction, see

ENGINEERING.

The ART CLUB, composed of advanced students in the fine arts, meets weekly in the lecture room of the Department for the study of selected topics. During the year 1906-7 the meetings were devoted to Italian Painting.

GEOLOGY

PROFESSOR CALVIN; PROFESSOR WILDER, Mr. EDINGER

A. COURSES FOR UNDERGRADUATES

***1 (2). PRINCIPLES OF GEOLOGY. 2 hrs.**

This course is designed to present the fundamental facts of geology for students who wish to become acquainted with the principles of the science without making a specialty of it. Lectures, illustrated with museum specimens, views, maps, and microscopic preparations. The course may be supplemented by course ASTRONOMY 101 (102). Professor CALVIN.

Tuesday and Thursday, at 9:00.

3. MINERALOGY, BRIEF COURSE. 3 hrs.

This course is intended to give a practical knowledge of the common minerals through familiarity with their physical properties and associations. Instruction is given in the lecture room and laboratory. Each student will determine the physical properties of some 2,000 unlabeled specimens. Whenever necessary to render determinations positive, blowpipe tests will be introduced. Prerequisite, general chemistry. This course is required of all civil engineering students and may be elected by students in other departments. Professor WILDER.

Monday, Wednesday, and Friday, at 9:00. First semester, laboratory periods.

4. GENERAL AND ECONOMIC GEOLOGY. 3 hrs.

This course is planned for those who wish to know something of the fundamental principles of geology, and at the same time are particularly interested in the economic aspects of the science. The great earth forming forces are considered, particularly with reference to their bearing on engineering problems and the economic products which have resulted from their operation. The course will include a study of the common rocks and their properties; and the nature of deposits of valuable minerals. Prerequisites, general chemistry and

*See note at bottom of page 111.

mineralogy. Required of civil engineering students; elective for others. Professor WILDER.

Monday, Wednesday, and Friday, at 9:00.

5. PHYSICAL AND DYNAMICAL GEOLOGY. 4 hrs.

In this course the principles of general geology are discussed so far as they relate to the destructive, constructive, and other dynamic forces which operate to bring about change on the earth's surface. Especial attention is given to the facts of rock-making, continent-making, and mountain-making, together with the evolution of the major and minor topographic forms of the North American continent. Large series of rocks, minerals, maps, lantern slides, photographs, and models afford the materials for lecture illustration and laboratory study. Lectures and laboratory work. Professor CALVIN.

Monday, Tuesday, Thursday, and Friday, at 10:00.

6. HISTORICAL GEOLOGY.

In this course attention is given to the time periods and rock systems recognized by geologists, to the physical and physiographic conditions under which the successive rock strata of North America were deposited, and to the lithology, geographical distribution, economic products, and typical faunas of the several formations, particularly those of the Mississippi Valley. Professor CALVIN.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

11 (12). PETROLOGY. 5 hrs.

(a). Crystallography; a study of the properties of crystals, the process of crystallization and the crystal systems, with laboratory exercises using natural crystals, crystal models, and microscopic sections of crystals.

(b). Descriptive and determinative mineralogy of the rock-making minerals.

(c). The mineralogical and chemical composition of rocks, their origin, structural features, and classification.

The laboratory equipment for this course consists of carefully selected collections representing all the principal rock-making minerals, rock families, and rock types, together with several hundred thin sections for study with the microscope

and a number of the latest and best petrographical microscopes. Lectures and laboratory work. Professor WILDER.

Daily, 1:30 to 3:30.

13 (14). INVERTEBRATE PALEONTOLOGY. 4 hrs.

The course in paleontology is designed primarily to give the student such acquaintance with fossil faunas as will enable him to determine the age of rocks containing recognizable organic remains. The principles of classification are studied and the principal fossil types are carefully described from museum material or from specimens collected in the field. Professor CALVIN.

Tuesday, Wednesday, Thursday, and Friday, at 8:00.

15 (16). GEOLOGY OF IOWA.

This course is offered to students who have had the equivalent of courses 3 and 4, or 3 and 5, and is intended for those who, for any reason, desire an intimate knowledge of the geology of the state. To count four hours for one, or two semesters. Hours arranged to meet the convenience of students. Professor CALVIN.

17 (18). PETROLOGY.

Advanced work is offered to students who have taken a course in petrology. The work will consist in the careful study of the rocks of a selected region, and the preparation of a thesis on the same. The course may be taken so as to count two, or four hours through the year. Professor WILDER.

C. COURSES PRIMARILY FOR GRADUATES.

19 (20). RESEARCH WORK IN PALEONTOLOGY.

This course may be taken as a major or a minor by candidates for graduate degrees. It may embrace such problems as the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological faunas, the geographical and geological range of certain zoological groups of organisms, or the evidences of descent in successive geological faunas. Length of course, from one to three years. Professor CALVIN.

21 (22). FIELD WORK IN GEOLOGY.

This work may cover any one of a large range of sub-

jects. For example, it may include the careful study of the indurated rocks of some selected area, making sections, correlating outcrops, mapping the geology, and writing a report. The study of Pleistocene geology in Iowa affords many interesting problems relative to the age and composition of the drift in different localities, the characteristics and origin of the crystalline boulders, the origin and distribution of the loess, and many other questions. The work may be directed by Professor CALVIN or Professor WILDER.

23 (24). RESEARCH WORK IN ECONOMIC GEOLOGY OR MINERALOGY.

The work in this course will depend largely on the previous preparation of the student. It may consist of detailed study of some geological field of economic importance, or of some mineral or group of minerals and the related industries. The credit will depend upon the nature of the work and the time spent. Professor WILDER.

31 (32). MINERALOGY FOR PROSPECTORS.

This course is intended to give the student such a familiarity with the physical characteristics and associations of minerals as will enable him to determine them with considerable accuracy without the aid of blowpipe or reagents. A large amount of labeled material is examined, and a still larger number of unlabeled specimens are given the student for identification. Such blowpipe practice as is deemed necessary to render determinations positive is included during the second semester. Prerequisite, general chemistry. Professor WILDER.

Lectures Monday, Wednesday, and Friday, at 10:00, with laboratory work throughout the year.

33 (34). THE NATURE AND ORIGIN OF ORE DEPOSITS. 2 hrs.

This course aims to study ore deposits in a way that will be of value to the prospector and mine operator. It will cover the more practical parts of the publications of Kemp, Lewis, De Launay, Posepny, and papers prepared for the United States Geological Survey, and the American Institute of Mining Engineers. Prerequisite, general chemistry. Mineralogy must be taken either before or with it. Course 31 (32) may

advantageously be taken during the same year. Professor WILDER.

Tuesday and Thursday, at 11:00.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON; ASSISTANT PROFESSOR STURM,
ASSISTANT PROFESSOR EASTMAN, MR. KOEHLER

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that students will be able to read the literature with some degree of appreciation, and from this time on the ability to understand, and to appreciate the great masterpieces of German literature is the main object in view; at the same time, however, the origin and history of words and the relation that the German language bears to the English tongue, are studied and explained. Sight translation, translating at hearing, writing from dictation, and conversation as means to a proper *Sprachgefühl*, form a part of the work.

Courses 1 (2), 3 (4), 5 (6), 7 (8), represent first year work, second year work, third year work, and fourth year work, respectively, and must be taken in the order of the numerals. Courses 9 to 28 are advanced courses, and may be taken in accordance with the regulations stated later.

All courses in German are offered every year except as otherwise indicated. Students are invited to consult with the instructors in arranging their work. Graduate students of German will find it to their special advantage to combine with their work some of the courses offered in the Scandinavian and English departments.

The German library is particularly rich in history of German literature, the history of the German language, Goethe literature, Middle High German, Old High German, and possesses complete bound sets of the most important philological periodicals. It is conveniently arranged in the German seminar room, No. 103 in the Hall of Liberal Arts, adjoining the other rooms of the department.

A. COURSE FOR UNDERGRADUATES

***1 (2). GRAMMAR AND READING. 5 hrs.**

German Grammar, with constant practice in writing German. The reading consists of easy plays and tales. These courses represent first year work. Seven sections. Assistant Professor STURM; Assistant Professor EASTMAN; Mr. KOEHLER.

3 (4). LESSING, SCHILLER, GOETHE, AND FREYTAG. 3 hrs.

Selections from the works of the authors named, with composition. Courses 3 and 4 represent second year work. Four sections. Professor WILSON; Assistant Professor STURM; Assistant Professor EASTMAN.

Monday, Wednesday, and Friday.

5. THE GERMAN NOVEL. 3 hrs.

Some such work as Scheffel's *Ekkehard*, or Freytag's *Soll und Haben*, is read and discussed as a piece of literary art. Course 5 represents third year work. Professor WILSON.

Monday, Wednesday, and Friday, at 11:00.

6. GERMAN LYRICS. 3 hrs.

This course is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. There are lectures on German verse with special reference to the lyric poets. Buchheim's *Deutsche Lyrik*, or von Klenze's *Deutsche Gedichte*, is read by the class. Course 6 represents third year work. Professor WILSON.

Monday, Wednesday, and Friday, at 11:00.

7. FAUST. 2 hrs.

Goethe's *Faust*, Parts I and II. The main object of this course is to help the student to the enjoyment of *Faust* as poetry. Careful attention is given to its artistic character as a piece of literature possessing unity. Course 7 represents fourth year work. Professor WILSON.

Tuesday and Thursday, at 11:00.

*See note at bottom of page 111.

8. HISTORY OF GERMAN LITERATURE. 2 hrs.

This course gives a general view of the development of German literature from the earliest times to the present, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Francke's *History of German Literature as Determined by Social Forces*, or Robertson's *History of German Literature*, is used as guide, but this is supplemented by reports on assigned reading by the students and by lectures by the instructor. Course 8 represents fourth year work. A course in Heine's *Prose* may be substituted for course 8. Professor WILSON.

Tuesday and Thursday, at 11:00.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

9. GERMAN SEMINAR. 2 hrs.

For the study and discussion of the works of special periods, of literary tendencies, or of other special subjects in the history of German literature. Each member of the Seminar undertakes, under the personal direction of the instructor, the examination of some special phase of the general subject, and makes regular reports upon the results obtained. As the subject varies from year to year, students may elect the course in succession without duplication. Professor WILSON.

Tuesday and Thursday, at 9:00.

10. GERMAN SEMINAR. 2 hrs.

A continuation of course 9. The work is conducted in the same manner, but a new subject may be taken up. Professor WILSON.

Tuesday and Thursday, at 9:00.

11. MIDDLE HIGH GERMAN. 2 hrs.

Bachmann's *Mittelhochdeutsches Lesebuch*, and Paul's *Mittelhochdeutsche Grammatik*. Includes a rapid survey of Middle High German forms, a comparative study of Middle High German and New High German syntax. The reading of this semester is largely epic poetry. Professor WILSON.

Tuesday and Thursday, at 10:00.

12. MIDDLE HIGH GERMAN. 2 hrs.

Course 11 is a prerequisite. The reading consists of lyric

and didactic poetry and of prose. The larger part of the time, however, is devoted to the lyrics of Walther von der Vogelweide. Professor WILSON.

Tuesday and Thursday, at 10:00.

13. OLD HIGH GERMAN PROSE. 2 hrs.

Primarily for advanced and graduate students. Braune's *Althochdeutsches Lesebuch* and *Abriss der althochdeutschen Grammatik* are used. Admission only on consultation with the instructor. Assistant Professor EASTMAN.

Omitted in 1907-1908; offered in 1908-1909.

14. OLD HIGH GERMAN POETRY. 2 hrs.

Course 13 is a prerequisite. Assistant Professor EASTMAN.

Omitted in 1907-1908; offered in 1908-1909.

15. OLD LOW GERMAN (Old Saxon). 2 hrs.

Introduction to Old Saxon grammar with reading in the *Heliand* and the *Genesis* fragment. Holthausen's *Altsächsisches Elementarbuch* and Behagel's edition of *Heliand* and the *Genesis*. Admission only on consultation with the instructor. Assistant Professor EASTMAN.

16. HISTORY OF THE GERMAN LANGUAGE. 2 hrs.

Primarily for advanced and graduate students. Prerequisite, one semester's work in any of the earlier periods of any of the Germanic languages. Admission only on consultation with the instructor. Assistant Professor EASTMAN.

19. TEACHERS' COURSE. 2 hrs.

The course will include review of German grammar, drill on pronunciation based on the study of phonetics, reports and discussions on the aims and methods of language study. Opportunity for practice and observation will be given. Admission only on consultation with instructor. Assistant Professor STURM.

20. TEACHERS' COURSE. 2 hrs.

A continuation of course 19. Assistant Professor STURM.

21. GERMAN LIFE. 1 hr.

A course of lectures in German on German life, institutions, and customs. Mr. KOEHLER.

Monday, at 1:30.

22. GERMAN LIFE. 1 hr.

A continuation of course 21. Mr. KOEHLER.

Monday, at 1:30.

23. DEUTSCHER AUFSATZ. 2 hrs.

This is a course in advanced German composition. Mr. KOEHLER.

24. DEUTSCHER AUFSATZ. 2 hrs.

A continuation of course 23. Mr. KOEHLER.

25. NINETEENTH CENTURY GERMAN DRAMA. 2 hrs.

For advanced students. Assistant Professor STURM.

26. NINETEENTH CENTURY GERMAN DRAMA. 2 hrs.

A continuation of course 25. Assistant Professor STURM.

27. NINETEENTH CENTURY NOVEL. 2 hrs.

For students who have had the equivalent of three years of college German. Such representative works as Hauff's *Lichtenstein*, Goethe's *Die Wahlverwandtschaften*, Freytag's *Soll und Haben*, Ludwig's *Zwischen Himmel und Erde*, Frensen's *Jörn Uhl* will be read. The reading will be supplemented by lectures and reports. Admission only on consultation with instructor. Given in alternate years. Assistant Professor EASTMAN.

28. NINETEENTH CENTURY NOVEL. 2 hrs.

A continuation of course 27. Assistant Professor EASTMAN.

SPECIAL CERTIFICATES IN GERMAN

Special certificates of scholarship in German are granted on or after graduation on conditions set forth elsewhere in this catalogue. The *minimum* amount of work required for admission to examination for such a certificate is represented by courses 1 to 6, and four courses chosen from 7 to 28.

GREEK LANGUAGE AND LITERATURE

PROFESSOR WELLER; PROFESSOR CALL

A. COURSES FOR UNDERGRADUATES

*1 (2). GRAMMAR AND READING. 5 hrs.

A course for beginners. The first semester is devoted to learning the elements of Greek grammar; during the second semester selections from Xenophon are read. Professor CALL.
Daily, at 11:00.

3 (4) DION CHRYSOSTOM; PLATO; HOMER. 4 hrs.

Review of syntax, with practice in composition; reading of Dion Chrysostom's *The Hunters of Euboea* and of Plato's *Apology*, for the first semester. In the second semester portions of Homer's *Iliad* are read, with lectures on Homeric times and on the Greek epic. Professor CALL; Professor WELLER.

Tuesday, Wednesday, Thursday, and Friday, at 10:00.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

7 (8) TRAGEDY AND LYRIC POETS. 3 hrs.

Reading of Euripides' *Medea*, Sophocles' *Antigone*, Aeschylus' *Prometheus*, and selections from the Lyric Poets; informal lectures on the origin, literary form, and representation of Greek tragedy. Professor WELLER; Professor CALL.

Monday, Wednesday, and Friday, at 9:00.

9 (10). THE HISTORIANS. 3 hrs.

Reading of portions of the histories of Herodotus, Thucydides, and Xenophon, with selections from the minor historians. An attempt will be made through the reading and by auxiliary lectures and readings in English to give a consistent general view of the period of history which these writers portray. Professor WELLER.

Monday, Wednesday, and Friday, at 11:00.

*See note at bottom of page 111.

11 (12). HELLENISTIC GREEK.

1 hr.

Reading of portions of the Septuagint version of the Old Testament and of the *Acts of the Apostles*, with a study of the Hellenistic dialect. Professor CALL.

Thursday, at 1:30.

13 (14). COMEDY.

2 hrs.

Reading of Aristophanes' *Clouds* and *Frogs*, with selections from other plays, as the time permits. Professor CALL.

Tuesday and Thursday, at 9:00.

16. GREEK LITERATURE.

1 hr.

An outline of the subject, with lectures and collateral reading. The course does not require a knowledge of Greek. Professor CALL.

Friday, at 1:30.

C. COURSES PRIMARILY FOR GRADUATES

19 (20). PINDAR AND THEOCRITUS.

2 hrs.

Critical study of some of the *Epinician Odes* of Pindar and of the *Idyls* of Theocritus; investigation of assigned topics in connection with the reading; study of the use of Theocritus by Vergil in his *Eclogues*. Professor WELLER.

Wednesday, 1:30 to 3:20.

23 (24). MODERN GREEK.

1 hr.

A practical study of the literary and colloquial language as used in Greece at the present time. Professor WELLER.

Monday, at 1:30.

25 (26). GREEK GRAMMAR.

1 hr.

Sounds and inflections—The course corresponds in aim and method to the course in Latin Grammar (LATIN 35). Professor POTTER.

The CLASSICAL CLUB, composed of instructors and advanced students, meets weekly in the Classical Library for the reading and study of Greek and Latin authors. The reading this year has been from Xenophon's *Minor Writings* and Suetonius' *Lives of the Caesars*.

Courses in Greek life and archæology are given under CLASSICAL ARCHÆOLOGY.

HISTORY

PROFESSOR WILCOX; PROFESSOR PLUM, ASSISTANT PROFESSOR
PEIRCE

A. COURSES FOR UNDERGRADUATES

*1. HISTORY OF GREECE. 4 hrs.

Text-books, lectures, and assignments. A general course in Greek history, intended for first-year students. Special attention is paid to training in methods of historical study. After the holiday recess, the history of Rome will be taken up as preliminary to course 2. Professor PLUM; Assistant Professor PEIRCE.

2. HISTORY OF ROME. 4 hrs.

Text-book, lectures, and assignments. An outline of political and constitutional history down to the crowning of Charles the Great; a study of the growth and organization of the republic, the development and decline of the Roman empire, and its transformation into the empire of the Germans. A continuation of course 1. Professor PLUM; Assistant Professor PEIRCE.

3 (4). MEDIAEVAL AND MODERN EUROPE. 2 hrs.

This course is the sequel of courses 1 and 2 and is designed to complete the general survey of the European field down to 1789. The course will be based upon a text which will be supplemented by lectures and special assignments. During the first semester the work will be mainly the study of Mediaeval institutions and their relation to the formation of the different states. During the second semester the work will center about the formation of the modern states and the successive great struggles growing out of their development.

The course is primarily designed for second year students but is open to all except first year students. Professor PLUM.

5. THE HISTORY OF EARLY AND MEDIAEVAL ENGLAND. 3 hrs.

This course consists of topical analyses, special assign-

*See note at bottom of page 111.

ments, and lectures. It is an outline study of English history from the beginning of English national life to the close of the War of the Roses. The central theme is the development of English political institutions. The social, economic, literary, and religious life of the people is studied in its relation to the political development of England. Professor PLUM.

6. ENGLAND UNDER THE TUDORS AND STUARTS. 3 hrs.

Topical analyses and lectures. This course covers the history of England from the end of the fifteenth century to the opening of the eighteenth. Special attention is given to the outworking of those complex forces of national life which have made England the foremost body politic in the modern states-system of Europe. Professor PLUM.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

7. RENAISSANCE AND PROTESTANT REVOLUTION. 2 hrs.

This course includes a summary of the Renaissance movement and an analysis of the factors of the Protestant Revolution. Course 4 is recommended as a preliminary to this course. Professor PLUM.

8. FREDERICK THE GREAT AND THE MAKING OF MODERN GERMANY. 2 hrs.

The history of Prussia will be followed from 1740 to 1870 as the center about which will be grouped the principal facts in the organization of the German Empire. Professor PLUM.

9. THE HISTORY OF THE UNITED STATES. 3 hrs.

This course is a series of lectures to advanced students. The lectures aim to present the various steps which led to the establishment of the Constitution of the United States in 1789. The struggle between the states of Europe for domination in America, the reasons for the English victory, the growth of the movement for independence and the working out of the problem of union, constitute the subject matter under consideration. Professor WILCOX.

10. THE HISTORY OF THE UNITED STATES.

Consists of lectures on the development of national politi-

cal life under the Constitution from its establishment in 1789 to the compromise of 1850. Professor WILCOX.

11. SECESSION AND RECONSTRUCTION. 2 hrs.

The twenty years of United States history from the great compromise of 1850 to the close of the period of reconstruction in 1870. The course is intended for advanced students. This is a course in continuation of courses 9 and 10. Professor WILCOX.

12. ENGLAND UNDER THE HOUSE OF HANOVER. 2 hrs.

This is a lecture course covering the last two centuries of English history. The course is open to those students who have already had courses 5 and 6 or their equivalents. Professor WILCOX.

13. THE NAPOLEONIC ERA IN EUROPE. 2 hrs.

From 1799, when the Directory was overthrown, to 1815, when Napoleon met his final defeat at Waterloo, the history of Europe is centered in France, and France is centered in Napoleon. The attempt is made to discuss the salient features of this period in a course of lectures to advanced students. It is not merely a chapter in the history of France but a survey of general European development during the fifteen years of Napoleon's power. Professor WILCOX.

14. EUROPE IN THE NINETEENTH CENTURY. 2 hrs.

This is an outline study, presented in the form of lectures, of the political history of Europe from the congress of Vienna in 1815 to the final steps in the consolidation of Italy and Germany, at the close of the Franco-Prussian war. This course is intended as a sequel to course 13. Professor WILCOX.

C. COURSES OPEN TO GRADUATES ONLY

15 (16). SEMINARY IN UNITED STATES HISTORY. 2 hrs.

This work is intended for those graduate students who wish to emphasize American history. The work consists of special individual research on selected topics in American history. The aim is to acquire a more intimate acquaintance with the body of knowledge comprised in American history, to develop

methods of independent research, and to become thoroughly acquainted with library sources. The results of the investigation are presented in reports to the seminary. Professor WILCOX.

LATIN LANGUAGE AND LITERATURE

PROFESSOR CURRIER; PROFESSOR POTTER, PROFESSOR WELLER,
MISS LOWMAN

A. COURSES FOR UNDERGRADUATES

*3 (4). CICEO. 4 hrs.

Selected orations. Miss LOWMAN.

Tuesday, Wednesday, Thursday, and Friday, at 1:30.

5 (6). VERGIL. 4 hrs.

Æneid. Professor WELLER.

Tuesday, Wednesday, Thursday, and Friday, at 1:30.

7 (8). LIVY; CICEO; HORACE. 5 (4) hrs.

First semester: Livy, selections from Books I, XXI, and XXII; Cicero, *De Senectute* or *De Amicitia*. Second semester: Horace, *Odes*; grammar; outline of Roman Literature. The period on Monday is devoted to composition; students may omit this hour, if they prefer. Professor POTTER; Professor WELLER.

Tuesday, Wednesday, Thursday, and Friday, at 8:00, 9:00 and 10:00.

9 (10). TERENCE; CICEO; HORACE. 3 hrs.

Terence, *Phormio*; Cicero, selected Letters; Horace, *Satires* and *Epistles*. This course is occupied mainly with the literary side of the authors studied. Prerequisite, course 7 (8). Professor POTTER.

Monday, Wednesday, and Friday, at 9:00.

11 (12). PLINY; TACITUS. 2 hrs.

Selected Letters of Pliny. Tacitus, *Germania* and *Agri- cola*. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Prerequisite, course 7 (8). Professor CURRIER.

Tuesday and Thursday, at 9:00.

*See note at bottom of page 111.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

13 (14). CICERO; QUINTILIAN; TACITUS. 2 hrs.

Cicero, *De Oratore*. Quintilian, Books X and XII. Tacitus, *De Oratoribus*. Particular attention will be paid to philosophy and to literary criticism, as exemplified in these authors. Prerequisite, course 9 or 11. Professor CURRIER.

Tuesday and Thursday, at 8:00.

15 (16). TACITUS; SENECA. 2 hrs.

Tacitus, selections from the *Annals*; Seneca, *Morals and Letters*. Prerequisite, course 9 or 11. Professor CURRIER.

Omitted in 1907-1908.

All students choosing their major in Latin, will be expected to take either 13 (14) or 15 (16).

17. PLAUTUS. 3 hrs.

In this course the metres are carefully studied and some attention is given to the ante-classical forms and constructions; but as provision is made in other courses for a more systematic study of the language, the attention is directed mainly to the Roman stage, and to contemporary and later Roman playwrights. The *Captivi*, *Trinummus*, *Menaechmi*, and *Rudens* are read together with selected scenes from the *Amphitruo*, *Miles Gloriosus*, and *Mostellaria*. The analysis of several other plays is given in informal lectures. Professor WELLER.

Monday, Wednesday, and Friday.

18. LUCRETIVUS AND CATULLUS. 3 hrs.

The aim is to study Lucretius's art rather than his philosophical system. All the more poetic passages in the *De Rerum Natura* are read. In this course, and also in course 23, considerable attention is given to the structure of the verse, and to the reading of it. Catullus is studied particularly in his relation to his successors in lyric, epic, elegiac, and epigrammatic poetry. Professor WELLER.

Monday, Wednesday, and Friday.

19. CICERO'S LETTERS. 3 hrs.

As students before taking this course will have acquired considerable facility in reading Latin, the attention will be

directed to the importance of the letters as historical documents. A large number of letters will be studied, selected with reference to the light that they throw on the many sided character of the orator, and also on the social and political conditions that prevailed at Rome at the end of the Republican period. Professor POTTER.

Monday, Wednesday, and Friday.

20. LUCAN; SENECA.

3 hrs.

The reading of Lucan's *Pharsalia* is supplemented with selections from Cæsar's *Civil War* and Suetonius's *Lives*. Lectures introductory to Seneca's *Medea* treat of the Roman tragic writers who preceded Seneca, and an effort is made to show the relation of the Roman to the Greek plays. Professor POTTER.

Monday, Wednesday, and Friday.

Omitted in 1907-1908.

21. ELEGIAC POETS.

3 hrs.

After a brief study of the Greek Elegiac poets the class will read the best elegies of Tibullus, Propertius, and Ovid. The aim of the course is to trace the history of classical elegiac poetry from Callinus to Ovid. Professor POTTER.

Monday, Wednesday, and Friday.

22. SATIRES OF JUVENAL; EPIGRAMS OF MARTIAL.

3 hrs.

The course includes incidentally a study of the private life and amusements of the Romans as set forth in these poems. Professor POTTER.

Monday, Wednesday, and Friday.

23. THE WORKS OF VERGIL.

3 hrs.

This course consists of literary studies covering Vergil's complete works, but most of the time is devoted to the *Aeneid*. Professor POTTER.

Monday, Wednesday, and Friday, at 10:00.

24. HISTORY OF ROMAN ORATORY.

3 hrs.

The first part of the semester is devoted to a study of Roman oratory before Cicero. Cicero's *Brutus* and Cortese, *Oratorum Romanorum Reliquiae* are used. During the rest of

the semester Cicero's orations for Roscius and against Verres are studied. Professor POTTER.

Monday Wednesday, and Friday, at 10:00.

25. CICERO'S CAREER AS AN ORATOR. 3 hrs.

This course combines original historical investigation covering the period from the time of the Gracchi till the death of Cicero, with the study of the orations, all of which are considered in chronological order. About thirty of the best speeches are read by the class. The course includes a special study of the conspiracies of Catiline, based largely on Sallust, Asconius, and Cicero's *Letters*. Prerequisite, courses 19, and 24 or 14. Professor POTTER.

Omitted in 1907-1908.

27 (28). CICERO; LIVY; OVID. 1 hr.

Sight reading of suitable selections. Professor CURRIER.

30. TEACHERS' COURSE.

This course combines theory, practice, and investigation. The members of the class serve as assistant teachers in a beginning Latin class, and investigate assigned problems. Prerequisite, course 23 or 25, and general psychology. Professor POTTER.

Five times a week; three hours' credit.

C. COURSES PRIMARILY FOR GRADUATES

33. EARLY LATIN. 2 hrs.

Metrical inscriptions and fragments of the poets. Professor POTTER.

Tuesday and Thursday.

Omitted in 1907-1908.

34. PETRONIUS AND LATE LATIN. 2 hrs.

The *Cena Trimalchionis*, Apuleius's *Cupid and Psyche*, and selections from the Christian Hymns. On the linguistic side considerable attention is given to the language of the common people and its relation to the Romance tongues. Professor POTTER.

Tuesday and Thursday.

Omitted in 1907-1908.

35. HISTORICAL LATIN GRAMMAR: SOUNDS AND INFLECTIONS.

2 hrs.

This course is based on the reading of inscriptions selected for their linguistic interest and arranged chronologically from the earliest times to the seventh century, A. D. Each member of the class is assigned some definite problem to investigate and report upon. Professor POTTER.

Tuesday and Thursday.

36. LATIN SYNTAX.

2 hrs.

Introduction to the study of historical syntax. Professor POTTER.

Tuesday and Thursday.

39 (40). ADVANCED COMPOSITION.

1 hr.

Professor POTTER.

Monday, at 11:00.

The CLASSICAL CLUB, composed of instructors and advanced students, meets weekly in the Classical Library for the reading and study of Latin and Greek authors. The reading this year has been from Suetonius' *Lives of the Caesars* and Xenophon's *Minor Writings*.

The department is supplied with mounted photographs and lantern slides for the illustration of lectures.

For courses in Roman Antiquities and Archæology see Courses 3 (4), 15 (16), under CLASSICAL ARCHAEOLOGY.

SPECIAL CERTIFICATES IN LATIN

Candidates for Teachers' certificates in Latin are expected to complete the following courses in addition to those of the freshman and sophomore years:

Junior Year—19, 24, or 17, 18.

Senior Year—23 or 25 and 30, and 39 (40). Advanced Composition (unless this course has been taken in junior year).

The other conditions to be met by candidates for these certificates are set forth under BACCALAUREATE DEGREES.

MATHEMATICS.

PROFESSOR WELD; MR. BAKER, DR. WAHLIN, MR. REILLY,
MR. SIMPSON, MR. ROOT, MR. ———

The grouping and the sequence of courses for the first two years are as follows:

	GROUP (A)	GROUP (B)
	(Daily)	(M., Tu., W., Th.)
<i>Freshman</i>		
1st quar.	Algebra, 21a	Alg., I., 3a
2nd "	Trig., 23b	Trig., 7b or Alg. II, 5b
3rd "	Anal. Geom., 24	Alg. II., 6a or Trig., 8a
4th "	Anal. Geom., 24	Graphics, 10b
<i>Sophomore</i>		
1st quar.	Calculus, 25	Anal. Geom., 11a
2nd "	Calculus, 25	Calculus, 13b
3rd "	Calculus, 26a	Calculus, 14a
4th "	Theo. of Eqs., 28b	Calculus, 14b
	GROUP (C)	GROUP (D)
	(Tu., W., Th., F.)	(M., Tu., Th., F.)
<i>Freshman</i>		
1st quar.	Solid Geom., 1a	.....
2nd "	Alg. I., 3b	.....
3rd "	Trig., 8a	Alg. I., 4a
4th "	Graphics, 10b	Alg. II., 6b
<i>Sophomore</i>		
1st quar.	Anal. Geom., 11a	Trig., 7a
2nd "	Calculus, 13b	Anal. Geom., 11b
3rd "	Calculus, 14a	Calculus, 12
4th "	Theo. of Eqs., 16b	Calculus, 12

Advanced work in mathematics may be begun upon the satisfactory completion of any of the above groups, but students intending to specialize in this subject are advised to elect either group (A) or group (B).

Students in civil, sanitary, electrical, mechanical and mining engineering will be scheduled in group (A). Divisions will also be organized for the accommodation of liberal arts students electing this group.

Group (B) is open to all students who have had three

years preparatory work in mathematics, including solid geometry, except when group (A) is prescribed by the course of study pursued.

When only the minimum preparation in mathematics is offered group (C) must be taken.

Group (D) is arranged for those entering at the opening of the second semester.

All courses will be given as indicated, provided the number of students applying shall warrant, except that the hours for the advanced courses are more or less subject to change. A general outline of the various courses is given below.

A. COURSES FOR UNDERGRADUATES

***1a. SOLID GEOMETRY. 4 hrs.**

A course in solid geometry and mensuration for students who have not completed the work in the high school.

First quarter; two divisions; Tuesday, Wednesday, Thursday, and Friday, at 9:00 and 10:00. Mr. BAKER; Mr. SIMPSON.

01. SOLID GEOMETRY. 1 hr.

To be given in 1907-1908 for students of the College of Applied Science who have not finished the subject in the high school.

Saturday, 8:00 to 10:00. Mr. SIMPSON.

2b. SOLID GEOMETRY. 4 hrs.

The same as 1a. Mr. SIMPSON.

Fourth quarter; Tuesday, Wednesday, Thursday, and Friday, at 2:30.

3a. ALGEBRA I. 4 hrs.

Exercises in the statement and solution of problems; the theory of the simple and of the quadratic equation; systems of simultaneous equations; ratio, proportion, and variation; the theory of exponents; logarithms. Mr. BAKER; Mr. SIMPSON, Dr. WAHLIN.

First quarter; four divisions; Monday, Tuesday, Wednesday, and Thursday, at 8:00, 9:00, 10:00, and 2:30.

*See note at bottom of page 111.

- 3b. ALGEBRA I. 4 hrs.
The same as 3a. Mr. SIMPSON; Mr. BAKER.
Second quarter; two divisions; Tuesday, Wednesday, Thursday, and Friday, at 9:00 and 10:00.
- 4a. ALGEBRA I. 4 hrs.
The same as 3a. Dr. WAHLIN.
Third quarter; Monday, Tuesday, Thursday, and Friday, at 1:30.
- 5b. ALGEBRA II. 4 hrs.
The same as 6a. Mr. SIMPSON.
Second quarter; Monday, Tuesday, Wednesday, and Thursday, at 9:00.
- 6a. ALGEBRA II. 4 hrs.
Progressions; properties of series and the development of functions into series; the binomial theorem; rudiments of the theory of equations. Mr. BAKER; Mr. SIMPSON.
Third quarter; three divisions; Monday, Tuesday, Wednesday, and Thursday, at 8:00, 10:00, and 2:30.
- 6b. ALGEBRA II. 4 hrs.
The same as 6a. Dr. WAHLIN.
Fourth quarter; Monday, Tuesday, Thursday, and Friday, at 1:30.
- 7a. TRIGONOMETRY. 4 hrs.
Trigonometric functions and formulae; logarithmic functions; solution of right and oblique angled triangles, both plane and spherical; practical applications to surveying, navigation and mensuration. Mr. ROOT.
First quarter; Monday, Tuesday, Thursday, and Friday, at 1:30.
- 7b. TRIGONOMETRY. 4 hrs.
The same as 7a. Mr. BAKER; Mr. SIMPSON; Dr. WAHLIN.
Second quarter; three divisions; Monday, Tuesday, Wednesday, and Thursday, at 8:00, 10:00, and 2:30.
- 8a. TRIGONOMETRY. 4 hrs.
The same as 7a. Mr. SIMPSON.
Third quarter: two divisions; Monday, Tuesday, Wednes-

day, and Thursday, at 9:00 and Tuesday, Wednesday, Thursday, and Friday, at 10:00.

10b. GRAPHICS.

4 hrs.

The graphical representation of natural laws and of statistical and observational data; graphical and mechanical solutions of algebraic and transcendental equations; interpolation; Simpson's formula; map projection, etc. A course intended to summarize in a practical way the knowledge of mathematics which the student has thus far acquired and to introduce him to its simpler applications. It is especially designed to meet the needs of those about to begin laboratory work and will also be useful to those expecting to teach either mathematics or material science. Equivalent to an introductory course in analytical geometry. Mr. SIMPSON; Mr. BAKER; Dr. WAHLIN.

Fourth quarter; six divisions; Monday, Tuesday, Wednesday, and Thursday, at 8:00, 9:00, 10:00 and 2:30; Tuesday, Wednesday, Thursday, and Friday, at 9:00 and 10:00.

11a. ANALYTICAL GEOMETRY.

4 hrs.

Rectangular and polar coördinates; examples of loci; the circle, ellipse and hyperbola and their limiting forms; tangents, normals and asymptotes; coördinates in three dimensions. Professor WELD; Mr. BAKER.

First quarter; Monday, Tuesday, Wednesday, and Thursday, at 9:00, and Tuesday, Wednesday, Thursday, and Friday, at 10:00.

The work for the first of the two divisions is more advanced than that for the second.

11b. ANALYTICAL GEOMETRY.

4 hrs.

The same as 11a. Mr. ROOT.

Second quarter; Monday, Tuesday, Thursday, and Friday, at 1:30.

12. CALCULUS.

4 hrs.

Differentiation; Taylor's theorem; indeterminate forms; maximum and minimum; tangents, normals and asymptotes; curvature and radius of curvature; integration; applications or integral calculus to problems in geometry, mechanics and physics. Mr. ROOT.

Monday, Tuesday, Thursday, and Friday, at 1:30.

13b (14a). CALCULUS.**4 hrs.**

The same as course 12. Professor WELD; Mr. BAKER.

Second and third quarters; two divisions; Monday, Tuesday, Wednesday, and Thursday, at 9:00, and Tuesday, Wednesday, Thursday, and Friday, at 10:00.

14b. CALCULUS.**4 hrs.**

The theory of plane curves. Continuous with the preceding courses in calculus and including the discussion of singular points, envelopes, involutes and evolutes, roulettes, pedals, etc. The student in group (B) may elect instead of this, either 16b or 28b. Professor WELD.

Fourth quarter; Monday, Tuesday, Wednesday, and Thursday, at 9:00.

16b. THEORY OF EQUATIONS.**4 hrs.**

Determinants; elimination; complex numbers; equations of higher degrees and their properties; symmetric functions of the roots; location of the roots; approximation to the roots of higher equations with numerical coefficients; solution of cubic and biquadratic equations. Mr. REILLY.

Fourth quarter; Tuesday, Wednesday, Thursday, and Friday, at 10:00.

21a. ALGEBRA.**5 hrs.**

Exercises in the fundamental operations and in factoring; simple and quadratic equations; systems of simultaneous equations; proportion and variation; progressions; the binomial theorem; exponential and logarithmic series; calculation by logarithms. Dr. WAHLIN; Mr. REILLY; Mr. ROOT.

First quarter; daily, at 8:00 (two divisions), 9:00 and 11:00 (two divisions).

23b. TRIGONOMETRY.**5 hrs.**

A course covering the elements of both plane and spherical trigonometry, with numerous applications. Dr. WAHLIN; Mr. REILLY; Mr. ROOT.

Second quarter; daily, at 8:00 (two divisions), 9:00 and 11:00 (two divisions).

24. ANALYTICAL GEOMETRY.**5 hrs.**

A general course in the analytical geometry of two and of

three dimensions. Dr. WAHLIN; Mr. REILLY; Mr. ROOT.

Daily, at 8:00 (two divisions), 9:00 and 11:00 (two divisions).

25 (26a). CALCULUS.

5 hrs.

This course is similar in scope to 13b (14a), but the several topics are more fully treated and the work is conducted with special reference to the requirements of technical students. Mr. BAKER; Mr. REILLY; Mr. —.

First, second, and third quarters; three divisions; daily, at 8:00 and 9:00.

28b. THEORY OF EQUATIONS.

5 hrs.

Similar to 16b, though for students somewhat more advanced. Mr. BAKER; Mr. REILLY; Mr. —.

Fourth quarter; three divisions; daily, at 8:00 and 9:00.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

31. ADVANCED CALCULUS.

3 hrs.

A continuation of the elementary courses in calculus, devoted particularly to such topics as the extension of Taylor's series, the series of Lagrange, maxima and minima of functions of two or more variables, transformations of differential equations; variations, etc. Professor WELD.

Monday, Wednesday, and Friday, at 10:00.

32. DIFFERENTIAL EQUATIONS.

3 hrs.

A general course devoted to the methods of solution of ordinary differential equations. This is open to all students who have completed any one of the groups (A), (B), (C), or (D). Professor WELD.

Monday, Wednesday, and Friday, at 10:00.

35 (36). DETERMINANTS AND MODERN GEOMETRY.

2 hrs

Determinants, the theory of quantics; the principle of invariance; modern analytical geometry of two and of three dimensions. Professor WELD.

Tuesday and Thursday, at 8:00.

39 (40). THE THEORY OF FUNCTIONS. 2 hrs.

Lectures, the works of Durège, Harkness and Morley, and others being used by the students for collateral reading.

Tuesday and Thursday, at 8:00.

Omitted in 1907-1908.

41 (42). FUNCTIONS OF REAL AND COMPLEX VARIABLES. 2 hrs.

An advanced course in function theory. Mr. BAKER.

Tuesday and Thursday, at 2:30.

43. DEFINITE INTEGRALS. 2 hrs.

Including a discussion of the beta and gamma functions. Lectures. Professor WELD.

Tuesday and Thursday, at 10:00.

44. ELLIPTIC INTEGRALS AND FUNCTIONS. 2 hrs.

Lectures, with problems and practical applications. Professor WELD.

Tuesday and Thursday, at 10:00.

49 (50). THEORY OF THE POTENTIAL AND SPHERICAL HARMONICS. 2 hrs.

The potential function; Laplace's equations of continuity in rectangular, cylindrical and spherical coördinates; Green's transformation; velocity potential; plane wave motion; Fourier's series and integral; application of Fourier's series to problems in acoustics, heat, and electricity; physical problems involving cylindrical, zonal, and spherical harmonics. This must be preceded by courses 31 (32), and by a course in analytical mechanics. Professor WELD.

Tuesday and Thursday, at 11:00.

May be omitted in 1907-1908.

55. THE THEORY OF SURFACES. 2 hrs.

With problems. May be given in place of 57, when it will be followed by (58). Mr. BAKER.

Tuesday and Thursday, at 1:30.

57 (58). DIFFERENTIAL EQUATIONS. 3 hrs.

An advanced course, including the theories of Sophus Lie. This must be preceded by course 31 (32). Mr. BAKER.

Throughout the year, or during second semester only.

Monday, Wednesday, and Friday, at 1:30.

63. THE METHOD OF LEAST SQUARES. 2 hrs.

With numerous applications to the reduction of series of physical observations. Professor WELD.

Tuesday and Thursday, at 10:00.

Omitted in 1907-1908.

64. THE THEORY OF STATISTICS. 2 hrs.

Application of the theory of probability to the discussion and graphical representation of statistical data. This in general should be preceded by course 63. Second semester. Professor WELD.

Tuesday and Thursday, at 10:00.

Omitted in 1907-1908.

67 (68). VECTOR ANALYSIS. 2 hrs.

A course based upon modern developments of the subject. Lectures and collateral reading. Professor WELD.

Tuesday and Thursday, at 11:00.

May be omitted in 1907-1908.

71 (72). GROUP THEORY. 2 hrs.

The theory of substitution groups and its application to algebraic equations. Will be given in alternate years with course 57 (58) or 55, (58). Mr. BAKER.

Tuesday and Thursday, at 2:30.

Omitted in 1907-1908.

99 (100). THE MATHEMATICAL SEMINARY is conducted for the benefit of students making a special study of mathematics, and is open to all who have completed elementary calculus. The topics upon which papers are prepared under the direction of the several instructors are such as are suggested by the regular work of the various courses.

Wednesday, 7:30 P. M.

THE LOWDEN MATHEMATICAL PRIZE

Competition for the Lowden mathematical prize of fifty dollars (\$50.00) for excellence in mathematics, established by Mr. Frank O. Lowden, of Chicago, is open to all students who are about to complete in course the work of the freshman and sophomore years in mathematics, the last year of such work

having been done at this University in the regular classes.

The examination upon which the prize is to be awarded will be conducted by the professor of mathematics, and will be held in May, not later than the second Saturday preceding the opening of commencement week. Candidates should prepare for examination in the following subjects: algebra, plane trigonometry, analytical geometry of two dimensions, the elements of differential and integral calculus.

The prize may be equally divided between not more than two candidates, or may be withheld if it shall appear that the work of no candidate is of a superior order of merit.

PHILOSOPHY AND PSYCHOLOGY

PROFESSOR SEASHORE; PROFESSOR STARBUCK, DR. STARCH

A. COURSES FOR UNDERGRADUATES

***1 (2). ELEMENTARY PSYCHOLOGY. 3 hrs.**

A general course designed as an outline study of the whole subject, an introduction to the special courses in psychology, and a foundation for courses in all other departments which deal primarily with the phenomena of mental life. The lectures will be illustrated with a rich collection of material for demonstration and by experiments before the class. Selections from the standard text-books will be read. Open to sophomores. Professor SEASHORE; Dr. STARCH.

3. LOGIC. 2 hrs.

The methods of induction and deduction. Exercise in the detection of fallacies and the expression of arguments. Open to sophomores. Professor STARBUCK.

4. LOGIC. 2 hrs.

Same as course 3. Professor STARBUCK.

5. ETHICS. 2 hrs.

An introduction to theories of morals and their practical application. The prominent problems of individual and social ethics. Dr. STARCH.

*See note at bottom of page 111.

6. ETHICS. 2 hrs.

Same as course 5. Dr. STARCH.

7 (8). HISTORY OF PHILOSOPHY. 3 hrs.

This course will serve as a general introduction to philosophical problems as well as to the history of thought. Attention will be given to the definition of terms and explanation of the meaning of the various philosophical problems. The first semester will be devoted to Greek philosophy, and early Christian and mediæval thought; the second semester, to modern philosophy.

This course should be taken as preliminary to all advanced courses in philosophy, and, where possible, should be preceded by the elementary courses in psychology, logic, and ethics. Professor STARBUCK.

9 (10). LABORATORY COURSE IN EXPERIMENTAL PSYCHOLOGY. 2 hrs.

The exercises are so selected and arranged as to familiarize the student with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem; during the first period the experiment is performed by each individual, the class being divided into groups of two, and during the second, the results and the literature on the subject are discussed on the seminary plan. Professor SEASHORE; Dr. STARCH.

This course may be taken with or in sequence to course 1 (2).

12. LOGIC OF DEBATING. 1 hr.

A consideration of the various mental processes employed in argumentation and an inquiry into the methods, other than logical, of producing conviction. Professor STARBUCK.

B. COURSES FOR UNDERGRADUATES AND GRADUATES**13 GENETIC PSYCHOLOGY. 2 hrs.**

The natural history of the development of the human mind, the periods of transition, the line of advance in the growth of the various processes and capacities and the condi-

tions both social and racial which influence the mental evolution in individuals. Lectures and assigned readings. Professor STARBUCK.

14. COMPARATIVE PSYCHOLOGY. 2 hrs.

A study of the mental life of animals: the evolution of consciousness, criteria of consciousness, tropisms, the development of the senses, instinct, memory, intelligence, social behavior, feelings and emotions. Dr. STARCH.

15. PHILOSOPHY AND PSYCHOLOGY OF RELIGION. 3 hrs.

The course will vary from year to year. During 1907-8 it will consist in a genetic interpretation of religion and a determination of its psychological content and its meaning as a factor in social evolution. Professor STARBUCK.

16. AESTHETICS. 3 hrs.

An elementary study of the principles of art. The course is especially occupied with a constructive study of the nature of the sense of the beautiful, meaning of the art impulse, and some of the laws of its expression. Lectures and reading. Professor STARBUCK.

For other courses in aesthetic theory, see FINE ARTS 1, and ENGLISH 65 (66).

C. COURSES PRIMARILY FOR GRADUATES

19. KANT. 2 hrs.

A reading of the *Critique of Pure Reason* and of selections from the *Critique of Practical Reason*, and the *Critique of Judgment*, accompanied by lectures and class reports upon the antecedents of the Kantian philosophy and the revision of it in succeeding systems. Professor STARBUCK.

This course, to be given in 1907-8, is in sequence with a course in Locke, Berkeley and Hume, and a course in Plato and Aristotle, which will be given in successive years.

21 (22). PROBLEMS IN PSYCHOLOGY.

A course of reading and criticism in the current literature of psychology. For the year 1907-8 special attention will be given to abnormal psychology. Individual work. Professor SEASHORE.

23 (24). RESEARCH IN PSYCHOLOGY.

Original investigation of special problems in psychology. Laboratory work and theses. The result of these investigations, if of sufficient worth, will be published in the *State University of Iowa Studies in Psychology*. Individual work. Professor SEASHORE.

25. HISTORY OF PSYCHOLOGY.**2 hrs.**

A general survey of the development of psychology in ancient, mediæval, and modern thought. Aristotle, St. Augustine, Kant, and Wundt, will be studied intensively as representatives of distinct periods. Dr. STARCH.

26. FOLK-PSYCHOLOGY.**2 hrs.**

A study of the mental development of the race: mental processes due to the communion of individuals, origin and growth of language and literature, social customs of family and tribe, animistic beliefs, myth, religion, invention, art, primitive music, comparison of the mental traits of different races and social levels. Dr. STARCH.

27 (28). PROBLEMS IN PHILOSOPHY.

Special individual research in some historical or critical problem of philosophy. Professor STARBUCK.

30. PHILOSOPHICAL SYSTEMS OF INDIA.**2 hrs.**

Lectures upon the sources of the monastic systems of India and suggestions upon a natural history of the human mind through a comparison of the lines of development in India, Greece and Germany. Professor STARBUCK.

PRACTICAL ETHICS—A course of public lectures given annually under the auspices of the Department of Philosophy and Psychology. The course in 1905-6 was on "The Moral Significance of Representative Pursuits in Student Life," and in 1906-7, on "The Ethics of Health."

PHYSICS

PROFESSOR GUTHE; PROFESSOR SMITH, MR. SIEG, MR.
WORTHING, MR. WOOD

A. COURSES FOR UNDERGRADUATES

The most desirable order in which the courses in Physics may be taken is course 1 (2), followed by 1a (2a). Either both of these courses or course 3 (4) will be required for any further work in the department.

*1 (2). GENERAL LECTURES, RECITATIONS AND LABORATORY

The following courses are suggested as a satisfactory preparation for students expecting to teach Physics in secondary schools:

First year: General Physics, 1 (2); 4 hours.

Second year: Advanced Physics, 1a (2a); 4 hours.

Third year: Laboratory work, 5, 6; 2 or 3 hours.

Meteorology, 7 (8); 2 hours.

Fourth year: History of Physics, 12; 2 hours.

Students beginning the work in Physics the second year, may substitute course 3 (4) for courses 1 (2) and 1a (2a). Freshman mathematics is required for all courses except 1 (2), and students are therefore urged to take mathematics the first year.

PRACTICE.

4 hrs.

This course is open to all students and may be taken without the mathematics of the freshman year. It is adapted to students desirous of a general knowledge of physics.

Lectures and recitations three times a week, at 9:00; laboratory work once a week. Professor SMITH and Mr. SIEG.

1a (2a). ADVANCED PHYSICS.

4 hrs.

This course in general physics is planned for those students who have taken course 1 (2) and wish to continue their work in Physics. It must be preceded by the mathematics of the freshman year.

Lectures and recitations four times a week. Mr. SIEG.

Monday, Tuesday, Wednesday, and Friday, at 9:00.

*See note at bottom of page 111.

3 (4). GENERAL PHYSICS. 6 hrs.

This course must be preceded by the mathematics of the freshman year.

Professor GUTHE; Mr. WORTHING.

Throughout the year; lectures and recitations four times a week, at 10:00; laboratory and problem work twice a week.

5, 6. ADVANCED PHYSICAL MEASUREMENTS.

Laboratory work two or more times a week. May be taken either semester. Mr. SIEG.

7 (8). METEOROLOGY AND CLIMATOLOGY. 2 hrs.

Atmospheric movements, temperature and pressure; winds and their classification; weather maps and weather predictions; meteorological instruments; humidity and precipitation. Climate as modified by surface features of the earth; influence on climate of ocean currents and forests; changes of climate. Students desiring to take laboratory work in connection with this course should elect course 5. Professor SMITH.

9. ELECTRICAL MEASUREMENTS. 3 hrs.

Comparison of resistances; measurement of current, electromotive force, capacity and inductance; calibration of direct current instruments; magnetic measurements.

Professor GUTHE; Mr. SIEG.

Recitations once a week, laboratory work twice a week.

11. OPTICAL PROPERTIES OF CRYSTALS. 2 hrs.

A study of interference and polarisation of light, of single and double refraction, with special reference to the optical properties of crystals. Mr. SIEG.

12. HISTORY OF PHYSICS. 2 hrs.

Lectures. Mr. WORTHING.

13. ANALYTICAL MECHANICS. 5 hrs.

A general course in this subject consisting of daily recitations. Intended primarily for students in engineering. Professor SMITH.

Daily, at 11:00.

C. COURSES PRIMARILY FOR GRADUATES

These courses, forming an advanced course in physics, must be preceded by courses 1 (2) and 1a (2a) or 3 (4) and be accompanied by courses 5 or 6. A knowledge of calculus is indispensable.

15 (16). THEORETICAL MECHANICS. 3 hra.

Lectures and recitations. (a) The laws of motion in general and those methods which are applicable to systems of all sorts. (b) The motion of rigid bodies. (c) Hydrodynamics. Professor SMITH.

17. THEORY OF SOUND. 2 hra.

Lectures. Professor SMITH.

18. THEORY OF LIGHT. 2 hra.

Lectures. Mr. SIEG.

20. THERMODYNAMICS. 2 hra.

Lectures. Professor GUTHE.

21 (22). THEORETICAL ELECTRICITY AND MAGNETISM. 2 hra.

Lectures. Professor GUTHE.

23. THEORY OF GASES AND SOLUTIONS. 2 hra.

Lectures. Professor GUTHE.

24. ELECTRICITY IN GASES. 2 hra.

Lectures. Mr. SIEG.

25 (26). RESEARCH.

Open to students who have a sufficient knowledge of general physics and who have the necessary experimental skill, acquired in courses similar to 5 and 6 above. A reading knowledge of French and German is required. The laboratory will be open to such students throughout the week. Professor GUTHE.

27 (28). SEMINARY.

In this course the advanced students in physics will be expected to prepare papers on special subjects or reports on their own work. Once a week, two hours. Professor GUTHE.

POLITICAL ECONOMY AND SOCIOLOGY

PROFESSOR LOOS; ASSISTANT PROFESSOR PEIRCE, DR. HANEY,
MR. WASSAM

Students who look forward to special courses of study in the School of Political and Social Science are advised to elect *Industrial History* or *Introduction to Economics* (1 and 2 or 4 and 3) in their sophomore year. Freshmen may elect *Actual American Government* (POLITICAL SCIENCE 3), followed by *Industrial History* 4; those who choose this option may take in their sophomore year *Introduction to Economics* 3.

Courses 1, 2, which are primarily for sophomores, or 5, 6, which are open to juniors and more advanced students, constitute the general introductory course for all courses in this department, courses 4, 3 being the same as 1, 2. Certain other courses, 7 to 14, 19 (20), 23 (24), 33 (34), may be taken at the same time with courses 1, 2 or 5, 6, but not independently as initial courses in economics. For the courses 17 (18) and 25 (26) in sociology, open only to juniors, seniors, and graduates, no specific previous course is required; the general introductory course in economics is, however, recommended as a preparation for these courses. On programs any of the courses of this department may be cited as economics followed by the appropriate number; or 15 to 26 as sociology.

A. COURSES FOR UNDERGRADUATES

*1. INDUSTRIAL HISTORY. 3 hrs.

After an introductory study of primitive man and primitive civilization the course will occupy itself mainly with the development of commerce and industry in England. Dr. HANEY; Mr. WASSAM.

Monday, Wednesday, and Friday, at 8:00 and 11:00.

2. INTRODUCTION TO ECONOMICS. 3 hrs.

An introduction to the leading principles of economic science. Primarily for sophomores; open also to more advanced students. Mr. WASSAM.

*See note at bottom of page 111.

2b. ECONOMICS.**5 hrs.**

A special course in general economics prescribed for seniors in mechanical, civil and electrical engineering for 1907-8. Mr. WASSAM.

Fourth quarter, daily, at 8:00.

3. INTRODUCTION TO ECONOMICS.**3 hrs.**

Same as course 2. Dr. HANEY; Mr. WASSAM.

Monday, Wednesday, and Friday, at 9:00 and 10:00.

3a. ECONOMICS.**5 hrs.**

A special course in general economics prescribed for juniors in mechanical, civil and electrical engineering, beginning in 1907-8. Dr. HANEY.

First quarter; daily, at 8:00.

4. INDUSTRIAL HISTORY.**4 hrs.**

Same as course 1. Given in conjunction with *Actual American Government* (POLITICAL SCIENCE 3), as a freshman elective. Followed by 3 or 5 it constitutes a general introductory course in economics, the same as 1 and 2. Mr. WASSAM; Mr. ———.

Monday, Wednesday, and Friday, at 9:00 and 11:00; a fourth hour by appointment.

B. COURSES FOR UNDERGRADUATES AND GRADUATES**5. PRINCIPLES OF ECONOMICS.****3 hrs.**

Fundamental economic concepts; the organization of industry; the distribution of wealth; the relation of the state to industrial action. Designed as a general survey of economic science for advanced students; open to third and fourth year students, to graduates, and professional students with or without a previous course in economics. Professor LOOS.

Monday, Wednesday, and Friday, at 9:00.

6. SOCIALISM AND SOCIAL LEGISLATION.**3 hrs.**

A study of socialism and contemporary social legislation, preceded by an historical introduction—a critical analysis of the industrial revolution in its economic and social aspects. Designed to follow course 5, 1, 2 or 3, 4. Professor LOOS.

Monday, Wednesday, and Friday, at 9:00.

7. CURRENCY AND BANKING. 3 hrs.

Money and credit instruments with outlines of the monetary history of the United States; the principles of banking and credit financiering. Professor LOOS.

Monday, Wednesday, and Friday, at 11:00.

8. PUBLIC FINANCE. 3 hrs.

The science of public finance; the theory of public expenditure; public income and public debts; the preparation of the budget and financial administration. Professor LOOS.

Monday, Wednesday, and Friday, at 11:00.

9 (10). COMMERCIAL GEOGRAPHY AND THE RAW MATERIALS OF COMMERCE. 2 hrs.

Prescribed for sophomores in the commerce course. Federal reports will be freely used, and the various year books and trade journals consulted. Mr. WASSAM.

Tuesday and Thursday, at 9:00 and 11:00.

11. TRANSPORTATION. 3 hrs.

Practically the entire course is given to the economics of railway transportation. The aim is so to familiarize the students with the elements of transportation that he may approach its problems intelligently. To this end much attention is given to discussions of the theory of rates; first giving such historical and technical data as are most necessary to an understanding of rate-making. Recitations, lectures, and papers. Dr. HANEY.

Monday, Wednesday, and Friday, at 2:30.

12. CORPORATION FINANCE AND BUSINESS ORGANIZATION.

3 hrs.

A study of the development of business organization from partnership to holding company, followed by a treatment of the various stages in the life history of a modern industrial corporation—promotion, underwriting, marketing, organization, accounting, reorganization, and receivership. The different kinds of stocks and bonds are studied; and in connection with marketing the corporation's securities, the New York stock exchange is discussed. Finally, certain remedies for the evils of corporation finance are taken up critically. Lectures readings, and reports. Dr. HANEY.

Monday, Wednesday, and Friday, at 2:30.

14. **TRANSPORTATION.** 3 hrs.
Same as course 11. Dr. HANEY.
Monday, Wednesday, and Friday, at 10:00.
15. **THEORY AND TECHNIQUE OF STATISTICS.** 2 hrs.
A study of the population of the United States will be used to illustrate the statistical methods of investigation. Mr. WASSAM.
Tuesday and Thursday, at 2:30.
16. **PROBLEMS IN STATISTICS.** 2 hrs.
Laboratory course. The preparation of schedules, methods of tabulation, tabular and diagrammatic presentation of facts; the use of averages, index numbers, the median, the coefficient of error and other statistical devices. Mr. WASSAM.
Tuesday and Thursday, at 2:30.
17. **SOCIAL AMELIORATION.** 2 (3) hrs.
State agencies for the care of delinquents and defectives, population elements; growth of municipal enterprises—public utilities and educational agencies; growth of philanthropic spirit—voluntary agencies for aid of needy classes. Assistant Professor PEIRCE.
Tuesday and Thursday, at 10:00, and third hour optional.
18. **CRIME AND CHARITIES.** 2 (3) hrs.
Criminology and penology; pauperism and methods of relief; philanthropic financiering; social settlements. Prerequisite, 17 or 21. Assistant Professor PEIRCE.
Tuesday and Thursday, at 10:00, and third hour optional.
19. **THE LABOR PROBLEM.** 2 hrs.
The labor problem in relation to modern industry; the rise and growth of labor organizations; the development of collective bargaining; industrial arbitration and conciliation; the principle of state interference in industry. Assistant Professor PEIRCE.
Tuesday and Thursday, at 8:00.
20. **THE MONOPLY PROBLEM.** 2 hrs.
A study of the social and economic significance of monopoly as a factor in the distribution of wealth, together with a

critical examination of the various proposals for the regulation and control of present day industrial combinations. Dr. HANEY.

Tuesday and Thursday, at 8:00.

21 (22). SOCIAL ANTHROPOLOGY AND ETHNOLOGY. 2 hrs.

The primary ethnical groups; man and his works in pre-historic times; primitive methods of social control. Culture stages and descriptions of the institutions of the less advanced contemporary races. Dr. HANEY.

NOTE. The attention of students in sociology is called to the courses in archæology. See announcement under CLASSICAL ARCHAEOLOGY.

23 (24). SOCIAL ECONOMICS. 2 hrs.

Selected topics in economics and sociology. Conducted as a seminary. Mr. WASSAM.

The work of each semester may be taken separately.

25. SOCIAL AND POLITICAL PHILOSOPHY. 2 (3) hrs.

The class will read Plato's *Republic and Laws*, Aristotle's *Politics*, Machiavelli's *Prince*, and selections from Hobbes, Montesquieu, Blackstone, and Locke; Spencer's *Man vs. the State*, Huxley's *Administrative Nihilism*, Ritchie's *Principles of State Interference*, and selections from other modern philosophers. Professor LOOS.

Tuesday and Thursday, at 11:00, and third hour optional.

26. SYSTEMATIC SOCIOLOGY. 2 (3) hrs.

The relation of sociology to the other social sciences; the physical and psychical aspects of association, social forces; social genesis; social values and social welfare. Professor LOOS.

Tuesday and Thursday, at 11:00, and third hour optional.

29. COMMERCIAL POLICIES. 3 hrs.

Beginning with a brief review of the historical commercial systems and the free-trade movement in England, the course will occupy itself mainly with the tariff history of the United States. Assistant Professor PEIRCE.

Monday, Wednesday, and Friday, at 8:00.

30. COMMERCIAL RELATIONS.**3 hrs.**

Reciprocity and commercial treaties; the volume and course of foreign trade; existing bounties, tariffs and subsidies; the consular service. Assistant Professor PEIRCE.

Mondays, Wednesdays, and Fridays, at 8:00.

31. TAXATION.**2 hrs.**

An intensive study of the principles, methods and systems of taxation with special reference to the incidence and effects of the several taxes. Course 8 must precede this course. Dr. HANEY.

32. INSURANCE.**2 hrs.**

The theory, history and organization of insurance. Mr. WASSAM.

33 (34). INDUSTRIAL HISTORY OF THE UNITED STATES. 2 hrs.

A study of the economic forces at work in the building of the nation. Lectures on topography and natural resources, together with population elements, form the groundwork of an account of the development of our industries and commerce. Dr. HANEY.

Tuesdays and Thursdays, at 9:00.

35 (36). MUNICIPAL FINANCE.**2 hrs.**

Studies in municipal finance, the problem of the public service, sanitation, finance statistics, and uniform municipal accounting. Admission to the course by special permission of the department. Professor LOOS; Mr. WASSAM.

37 (38). COMMERCIAL LAW.

Students during their senior year may schedule in the College of Law for contracts, bills, and notes, and similar courses, under the advice of this department, but in no case for more than five hours in one semester. Students so scheduling must pay tuition in the College of Law.

C. COURSES PRIMARILY FOR GRADUATES**39 (40). ADVANCED ECONOMIC THEORY.****2 hrs.**

The rise and development of the classical school of economists will first be considered. This will be followed by a study

of the recent development of political economy. The class will read (1) portions of Adam Smith's *Wealth of Nations*, Malthus's *Essays on Population*, Ricardo's *Political Economy*, and Cairnes's *Leading Principles*; and (2) selections from the writings of the Austrians and from Marshall, Clark, and other modern economists. Professor LOOS; Dr. HANEY.

47 (48). GRADUATE SEMINARY. 2 hrs.

The subject for 1907-8 will be socialism and social legislation. Professor LOOS.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH; ASSISTANT PROFESSOR HORACK

Freshmen are advised to schedule for course 3, which is announced under the title of "Actual American Government." Students who desire to elect but one year's work in this department are advised to schedule for courses 1 and 2. Those who expect to pursue a more extended line of study in political and social science are advised to schedule for these courses in their second or sophomore year.

Courses 7, 8, and 11 constitute a liberal introduction to the study of law, and are arranged for students who expect to take a law course.

A. COURSES FOR UNDERGRADUATES

*1. AN INTRODUCTION TO POLITICAL SCIENCE. 3 hrs.

In the study of political and social science this course is fundamental, being a general introduction to the phenomena of organized society among men. The scope of the lectures may be briefly indicated as follows: the early history of mankind, wherein evolution and the fundamental laws of human progress will be explained and their application to the development of social and political institutions clearly indicated; a general consideration of anthropology with reference to its bearings upon the study of the political and social institutions of the Indo-European peoples; the origin of gov-

*See note at bottom of page 111.

ernment historically considered; the political institutions of the ancient Greeks, and a consideration of their political ideas and ideals; the political institutions of the Romans, and a consideration of their contributions to public law and jurisprudence; primitive Germanic institutions, especially the markgenossenschaft; and mediæval politics—feudalism and the Church and State. Open to all students except freshmen. Professor SHAMBAUGH.

Monday, Wednesday, and Friday, at 8:00.

2. MODERN GOVERNMENTS. 3 hrs.

Lectures on the governments of France, Germany, Prussia, Switzerland, Belgium, Australia, and England. Open to all students except freshmen. Professor SHAMBAUGH.

Monday, Wednesday, and Friday, at 8:00.

3. ACTUAL AMERICAN GOVERNMENT. 4 hrs.

This course, being designed especially for freshmen, aims to take up the subject of government in the United States where the courses in civics in the high schools leave off. Herein American Government will be treated not only as to form and organization, but especially from the viewpoint of (1) fundamental principles, (2) the actual workings and operations of local, state, and national administration, and (3) the relation of the citizen to public affairs. Open to freshmen. Assistant Professor HORACK.

Monday, Tuesday, Wednesday, and Thursday, at 9:00 and 11:00.

4. COMPARATIVE STATE LEGISLATION. 3 hrs.

A study of present problems. Herein particular attention will be given to the growth of trusts and corporations showing the diversity of provisions for their organization and control, as well as the causes tending toward greater uniformity of law embodied in federal legislation. State and federal statutes and decisions will be studied and compared. The course will be non-technical. Open to juniors and seniors. Assistant Professor HORACK.

Monday, Wednesday, and Friday, at 11:00.

5. POLITICAL PARTIES. 3 hrs.

This course will be divided into two parts; part one will

be devoted to the study of the history of political parties since the adoption of the constitution and will include a consideration of the issues upon which parties are founded. The second part will be devoted to the study of the political machinery of parties—caucuses, nominating conventions, committees, etc.—and to an examination of campaign literature—including platforms, political circulars, speeches, cartoons, etc. Open to juniors and seniors. Assistant Professor HORACK.

Monday, Wednesday, and Friday, at 9:00.

6. MUNICIPAL GOVERNMENT. 2 hrs.

A study of the organization and administration of city governments. The problems of modern city life. The sphere and functions of municipal governments. Their relation to quasi-public works. Open to juniors and seniors. Assistant Professor HORACK.

Tuesday and Thursday, at 9:00.

7. JURISPRUDENCE. 3 hrs.

A study of nature, definition, classification, and divisions of law. This course will include lectures on the history and fundamental principles of the civil law of Rome and the common law of England. The discussions will be largely non-technical. Recommended in the combined college of liberal arts and law course. Open to juniors and seniors. Professor SHAMBAUGH.

Monday, Wednesday, and Friday, at 10:00.

8. CONSTITUTIONAL LAW. 3 hrs.

An introductory study of the nature, principles, and powers of government in the United States as reflected in written constitutions and in judicial interpretations. Leading cases in constitutional law will be read and discussed. Recommended in the combined college of liberal arts and law course. Open to juniors and seniors. Professor SHAMBAUGH.

Monday, Wednesday, and Friday, at 10:00.

9. AMERICAN POLITICAL THEORY. 2 hrs.

A study of American political ideas and ideals, wherein leading state papers will be analyzed, and the political theories of such representative American thinkers as William Penn, Thomas Paine, Washington, Hamilton, Jefferson, John A. L.

ams, Samuel Adams, Madison, Fisher Ames, Marshall, Monroe, Webster, Calhoun, Clay, Alexander Stephens, and Lincoln will be discussed and criticised. Open to juniors and seniors. Professor SHAMBAUGH.

Tuesday and Thursday, at 11:00.

10. AMERICAN POLITICAL THEORY. 2 hrs.

This will be a continuation of course 7. Open to juniors and seniors. Professor SHAMBAUGH.

Tuesday and Thursday, at 11:00.

11. INTERNATIONAL LAW. 2 hrs.

A study of the nature, sources, and sanctions of International Law. The causes determining the development of international relations will be considered with special emphasis upon the modern application of the rules of International Law. The Law of Peace, the Law of War, and the Law of Neutrality will be presented through reference to cases, lectures, assigned readings, and reports. Recommended in the combined liberal arts and law course. Open to juniors and seniors. Assistant Professor HORACK.

Tuesday and Thursday, at 10:00.

12. POLITICAL SCIENCE CONFERENCE. 1 hr.

A weekly conference for the discussion of contemporaneous political problems, current legislation, and current political literature. Professor SHAMBAUGH; Assistant Professor HORACK.

Tuesday, 2:30 to 4:30.

13. IOWA HISTORY AND POLITICS. 2 hrs.

A course of lectures on the history and politics of Iowa. Professor SHAMBAUGH.

Tuesday and Thursday, at 1:30.

14. GOVERNMENT OF COLONIES AND DEPENDENCIES. 2 hrs.

A study of the history and principles of the various systems of colonial government and administration, with special reference to American territories and dependencies, the phenomenon of "expansion," the causes of migration, the diversity in race characteristics, and the conditions necessary for

local self-government. Open to juniors and seniors. Assistant Professor HORACK.

Tuesday and Thursday, at 8:00.

C. COURSES PRIMARILY FOR GRADUATES

15. COMPARATIVE NATIONAL GOVERNMENTS. 2 hrs.

A comparison of the provisions of the constitutions of England, United States, France, Germany and Switzerland, from both a theoretical and a practical standpoint. Assistant Professor HORACK.

16. THEORIES OF SOVEREIGNTY. 2 hrs.

A general survey of political theories as to the origin, nature, and limitations of governmental authority in relation to the individual. It is the purpose of this course to show historically the development of ideas concerning the functions and powers of government. Assistant Professor HORACK.

17 (18). POLITICAL THEORY. 2 hrs.

In this course a system of pure political theory will be outlined and correlated with philosophy. Professor SHAMBAUGH.

20. ADMINISTRATIVE LAW. 2 hrs.

A comparative study of administrative law in France, Germany, England, and the United States. Professor SHAMBAUGH.

21 (22). SEMINARY IN POLITICAL SCIENCE. 2 hrs.

In 1907-1908 selected subjects will be assigned for critical study and discussion. Professor SHAMBAUGH; Assistant Professor HORACK.

ROMANCE LANGUAGES

ACTING PROFESSOR BUSH; ASSISTANT PROFESSOR LE DAUM,
MISS VOSS, MR. MITCHELL, MR. MAIN

A. COURSES FOR UNDERGRADUATES

*1 (2). FRESHMAN COURSE. 5 hrs.

Frazer and Squair's *A French Grammar*. Practice in

*See note at bottom of page 111.

writing and hearing French. The student reads four easy books, and is expected to acquire a good reading knowledge of the language. Acting Professor BUSH; Assistant Professor LE DAUM; Miss VOSS; Mr. MITCHELL.

Daily. Five sections. An additional section will be formed at the opening of the second semester.

21 (22). ELEMENTARY TECHNICAL FRENCH. 3 hrs.

A course for scientific students. Grammar for reading purposes only. Rapid reading of selections from current scientific periodicals and technical works to enable students to use scientific French readily. Assistant Professor LE DAUM

Monday, Wednesday, and Friday, at 11:00.

3 (4). SOPHOMORE COURSE. 3 hrs.

This course aims to give the student a good knowledge of both the spoken and the written language. The reading consists of the most interesting novels, short stories and plays of the great writers of the nineteenth century, such as, Victor Hugo, Balzac, George Sand, Daudet, Augier, Maupassant, Coppée, Anatole France. Acting Professor BUSH; Miss VOSS.

Two sections; Monday, Wednesday, and Friday, at 10:00 and 11:00.

In addition to this course, students will find course 5 (6) of great value in acquiring a command of the spoken language.

5 (6). CONVERSATION COURSE. 2 hrs.

Designed to train students to speak French with some facility. Composition; French life and institutions. Open to students who have passed course 1 (2) and especially adapted to those taking the Sophomore course. Miss VOSS.

Tuesday and Thursday, at 10:00.

B. COURSES FOR UNDERGRADUATES AND GRADUATES

7 (8). FRENCH LITERATURE.

A lecture and reading course intended to give an appreciation of the most important and interesting masterpieces of French genius. The lectures will treat, first, the life and literature of the mediæval period, the Renaissance down to mod-

ern times, and then bridge over in some measure the gap between works read in class. Open to those who can read French with some ease and especially intended as third year French. Acting Professor BUSH.

Students should consult the instructor before taking any of the following courses. The requisite for admission is the ability to read ordinary French without difficulty. The courses are arranged in groups to be given in alternate years. 9 (10), 13, 14, 17 (18), will be offered in 1907-8.

9 (10). DAUDET AND THE FRENCH NOVEL SINCE 1870. 2 hrs.

Rapid translation, analysis, and study of selected novels and short stories. Assistant Professor LE DAUM.

Tuesday and Thursday, at 2:30.

11 (12). THE FRENCH DRAMA. 2 hrs.

Representative works are read in class, and lectures are given tracing the development of the drama in France from Corneille to Rostand. Assistant Professor LE DAUM.

Tuesday and Thursday, at 2:30.

Omitted in 1907-1908.

13. RENAISSANCE. 2 hrs.

A lecture course on the Renaissance in Italy and France and its relation to later civilization. The work will consist largely of the study of various phases of the Renaissance suggested by the lectures. Much of the reading will necessarily be in English. Acting Professor BUSH.

Tuesday and Thursday, at 10:00.

14. MOLIERE. 2 hrs.

A study of the life and works of the greatest writer of comedy in France. A few of the most important plays will be read in class. Outside reading and discussion of special topics. Acting Professor BUSH.

Tuesday and Thursday, at 10:00.

15. VOLTAIRE. 2 hrs.

Lecture and reading course. Some of the topics discussed will be, Voltaire's English exile, relations with Frederick the Great, Rousseau, etc., unique position at Ferney, his

attitude toward the Church, society of the day. Voltaire's stories, histories and plays. Acting Professor BUSH.

Omitted in 1907-1908.

16. HUGO.

2 hrs.

Victor Hugo will be studied as the leader of the Romantic movement, and a selection of the best of his poems, novels, and dramas will be read, to give an idea of his manifold activity. Acting Professor BUSH.

Tuesday and Thursday, at 10:00.

Omitted in 1907-1908.

17 (18). MODERN FRENCH POETRY, VILLON TO VERLAINE. 2 hrs.

A reading course based on Canfield's *French Lyrics*, Masson's *Lyrie Française* and de Banville's *Short Treatise on French Versification*. Assistant Professor LE DAUM.

Tuesday and Thursday, at 9:00.

19 (20). OLD AND MIDDLE FRENCH.

2 hrs.

A reading course in Old French prose and poetry. The development of the language from Latin to Modern French is studied and attention is given to the life and ideas of the Middle Ages. Cledat's *Crestomathie de l' Ancien Français*, *Aucassin et Nicolette*, Chrestien de Troye's *Yvain*. Acting Professor BUSH.

Tuesday and Thursday, at 9:00.

Omitted in 1907-1908.

SPANISH AND ITALIAN

1 (2). ELEMENTARY SPANISH.

3 hrs.

I. Translation of Prose. Selections from Modern Spanish Authors; II. Giese's *A first Spanish Book and Reader*; III. Composition, based on Ford's *Materials*; IV. Pronunciation and Conversation. Assistant Professor LE DAUM,

Monday, Wednesday, and Friday, at 9:00.

3 (4). ADVANCED COURSE.

2 hrs.

I. Selections from Modern Spanish Authors; II. Selections from *Don Quixote de la Mancha*; III. Spanish lyrics

from the XIII century to the present time. Assistant Professor LE DAUM.

Tuesday and Thursday, at 11:00.

Omitted in 1907-1908.

1 (2). ITALIAN.

2 to 3 hrs.

An elementary course aiming to give a good reading knowledge of the language and some ability to write it. Grandgent's *Italian Grammar and Composition*. The class reads modern stories and plays. Acting Professor BUSH.

Given alternate years.

Tuesday, Thursday, and (at the pleasure of the instructor) Saturday, at 11:00.

SANSKRIT

PROFESSOR POTTER

The courses in Sanskrit are intended to afford a general introduction to Indo-European comparative grammar and to lay the foundation for future reading in the literature and philosophy of the ancient Hindus.

*1. Sanskrit grammar and the reading of easy selections from the *Nala*. Lectures on Sanskrit phonology.

First semester; Tuesday and Thursday.

2. Introduction to the *Veda*. Lectures on Hindu history and literature.

Second semester; Tuesday and Thursday.

A supplementary reading course, for the purpose of drill in vocabulary and grammatical forms, is offered in the Summer Session.

For additional courses in Indo-European grammar see Greek, course 24 (26); Latin, course 35 (36), German, course 11-16, 19; Scandinavian, courses 9 (10), 14 17, 18, 20, 24; English, courses 71 (72), 75, 76, 91.

SCANDINAVIAN LANGUAGES AND LITERATURE

PROFESSOR FLOM

In the department of Scandinavian the aim is to give

*See note at bottom of page 111.

equal attention to the literature and philology of the Northern languages. Course 1 (2) is intended for students who have no previous knowledge of Scandinavian. This course is intended to give the student such a thorough reading knowledge of modern Norse as shall enable him to read the works of Ibsen, Björnson and Lie. Courses are offered to suit the needs of students of Scandinavian parentage, who have a fair knowledge of a Scandinavian language, but who wish to pursue in class a more systematic study of the literature. For such students three courses are offered: 3 (4), 5 (6), 7 (8). The first of these will be preceded by a short course in Swedish grammar. Course 9 (10) is recommended especially to students in German and English philology. Such students who wish to take Scandinavian as a minor for a higher degree should combine course 9 (10) with 1 (2) or 3 (4), if registered for the M. A. degree. If the degree of Ph. D. is sought, a third course such as 11 (12) should be taken the following year. To students in literature who wish to take Scandinavian literature as a minor for a higher degree 3 (4) and 7 (8) are recommended, although either may be combined with 1 (2). If Scandinavian is chosen as a major for a higher degree, the amount and kind of work must be arranged in each case by the head of the department.

A. COURSES FOR UNDERGRADUATES

*1 (2). NORSE.

4 hra.

Principles of grammar, pronunciation, and the reading of easy prose will form the first semester's work. Olson's *Norwegian Grammar and Reader* is used, with readings from Björnson's *Smaastykker*. In the second semester the class will read Björnson's *Synnöve Solbakken* (ed. Flom) and Ibsen's *Samfundet's Stötter*. In this course stress is laid on Norwegian idioms and phraseology as differing from English.

As Norwegian Grammar is comparatively simple this course should give the student a good reading knowledge of the language. Open to freshmen.

Monday, Tuesday, Wednesday, and Thursday, at 9:00.

*See note at bottom of page 111.

A two hour course of a similar nature is offered for advanced students.

B. COURSES FOR UNDERGRADUATES AND GRADUATES.

3 (4). SWEDISH LITERATURE.

With a brief introductory course in Swedish grammar in which Sundén's or Fort's grammar is used. Study of the Gustavian period, 1772-1809, and the period of Tegnér, 1809-1846; the Classicists, the Romantic school, the Gothic school, Tegnér and his contemporaries. *Frithiofs Saga* as Tegnér's chief work is carefully studied. Runeberg's *Fänrik Ståls Sägner* will be read in part, also Selma Lagerlöfs *I Dalarne*. The class study is supplemented by a course of twelve lectures on the history of Swedish literature.

5. DANISH LITERATURE.

2 hrs.

A reading course in Ludvig Holberg's comedies.

Tuesday and Thursday, at 2:30.

Omitted in 1907-1908.

Lectures and class-reading of masterpieces.

7 (8). ADVANCED NORWEGIAN.

2 hrs.

Class reading and interpretation of masterpieces of Norwegian literature, as Holberg's *Gert Westphaler*, Welhaven's *Norges Dämring*, Björnson's *Arne*, Ibsen's *Kongsemnerne*, Lie's *Trold*, and Garborg's *Bondestudentar*. Prerequisite, 1 (2), or a reading knowledge of Norwegian.

C. COURSES PRIMARILY FOR GRADUATES

9 (10). OLD NORSE.

2 hrs.

Elementary course. The aim of this course is to equip the student with a good vocabulary, and to acquaint him with the peculiarities of the phonology, inflection, and syntax, so as to enable him to read the Old Norse literature and to use the language for the purpose of comparative study within the Germanic group of languages. Sweet's *Icelandic Primer* and Holthausen's *Lehrbuch der Altisländischen Sprache* will be used. Given every year.

Wednesday and Friday, at 10:00.

11 (12). OLD NORSE: THE ELDER EDDA.

2 hrs.

Advanced course. May be taken only by those who have had course 9 (10) or an equivalent. In the first semester the following mythological lays have usually been studied: *Trymskuvidha*, *Hymiskuvidha*, *Alvismol*, *Harbardhsljodh*, *Loksenna*, *Skirnismol*, *Grimnismol*, *Vaftrundhnismol*, *Baldrs Draumar*, *Volospo* and *Hovamol*. In the second semester have been read the *Volundarkividha* and the heroic lays of the Volsung Niflunga cycle. The edition used in Jonsson's *Eddalieder* together with Gering's *Vollständiges Wörterbuch zu den Liedern der Edda*.

Omitted in 1907-1908.

13. SURVEY OF SWEDISH LITERATURE.

1 hr.

A course of weekly lectures which will aim to present in survey the development of Swedish literature from the earliest time down to Tegnér's death.

Wednesday, at 3:30.

Omitted in 1907-1908.

14. HISTORY OF THE SCANDINAVIAN LANGUAGES.

2 hrs.

Lectures. Prerequisite, a knowledge of one Old Germanic dialect.

Omitted in 1907-1908.

16. HENRIK IBSEN.

2 hrs.

Lectures and class-reading of one or more of Ibsen's dramas. The development of Ibsen's art and his philosophy of life will receive special attention in this course. In 1907 *Peer Gynt* and *Hedda Gabler* were read and interpreted. In 1908 *Brand* and *John Gabriel Borkman* will be studied. Archer's translation of Ibsen's works is used. The course is intended as an introduction to Ibsen; it does not presuppose any knowledge of Norwegian.

18. OLD SWEDISH.

2 hrs.

This course will begin with lectures on the relation of East to West Scandinavian and on early dialectal differentiation in Old Danish and Old Swedish. The work will be based on Noreen's *Altschwedische Grammatik* and *Altschwedisches Lesebuch*. Prerequisite, a knowledge of one Old Germanic dialect.

Omitted in 1907-1908.

20. LINGUISTIC RELATIONS OF ENGLISH AND SCANDINAVIAN.

2 hrs.

Lectures. Prerequisite, a knowledge of Old Norse and Old or Middle English.

Omitted in 1907-1908.

21. NORSE MYTHOLOGY.

1 hr.

Lectures. An outline of the religious belief of the Norsemen in pre-Christian times, with a study of the origin and transmission of the principal myths.

This course will not repeat the course given in 1906-1907, which covered the following topics: the Sources of Norse Mythology and the Gods of Norse Mythology.

24. TEUTONIC GRAMMAR.

2 hrs.

Primitive and comparative. The course will take its departure from the linguistic forms of the earliest Runic Inscriptions after which the work will be based largely on Streitberg's *Urgermanische Grammatik*. The historical development of each separate member of the group (*Gothic, Old Norse, O. H. German, Old English, Old Swedish, Old Frisian, Old Saxon*) will be traced in outline.

In addition to above courses any course under A and B may be taken by graduate students as part of the requirements for a degree.

The list of Scandinavian periodicals accessible to students in the library (room 10), or the office and seminary is very complete in works needed by students of Scandinavian language and literature.

ZOOLOGY

PROFESSOR NUTTING; PROFESSOR HOUSER, PROFESSOR WICKHAM, DR. STROMSTEN, MISS PRENTISS, MR. KNAPP, MISS JEWELL

A. COURSES FOR UNDERGRADUATES

Courses 1 (2), 3, and 4 are the fundamental courses in this department and should be taken by those expecting to teach zoology or to specialize in that science.

1 (2). ANIMAL BIOLOGY.*4 hrs.**

Lectures and laboratory work introductory to the entire field of animal life. The lectures present the fundamental principles of biological science. In the laboratory, living matter, the cell, elementary vital phenomena, and the unicellular organisms are first considered. Later, studies are made of a representative of each of the chief animal groups—the activities characteristic of it; its natural environment; the structure of its adult form, both anatomical and microscopical; its life-history. In the second semester, emphasis is placed on the structure of vertebrates and the physiological processes essential to animals. Professor HOUSER; Dr. STROMSTEN, and assistants.

Lectures Tuesday and Thursday at 9:00; laboratory, two afternoons of two hours each per week.

3. COMPARATIVE ZOOLOGY OF INVERTEBRATES.**4 hrs.**

This course will consist of laboratory work in which the various classes of invertebrate animals will be compared by the use of the exceptionally large series in the museum, their resemblances and differences pointed out and described, and their habits and relationships studied. This work will be supplemented by lectures and illustrations by the instructors, and is particularly valuable to persons who are preparing to teach zoölogy. Open to all students. Professor NUTTING; Miss PRENTISS, Mr. KNAPP.

Monday, Tuesday, Wednesday, and Thursday.

4. COMPARATIVE ZOOLOGY OF VERTEBRATES.**4 hrs.**

This is a continuation of course 3 and will embrace similar work, particularly with mammals and birds, together with field work in the Spring. The comparative osteology of the Mammalia will be particularly emphasized. It is the purpose to enable the student to readily identify the mammals and birds of the United States, and also to become acquainted with their habits and ecology. Professor NUTTING; Miss PRENTISS; Mr. KNAPP.

Monday, Tuesday, Wednesday, and Thursday, at 10:00.

5 (6). GENERAL ENTOMOLOGY.**4 hrs.**

An introductory course, covering briefly the history and

*See note at bottom of page 111.

development of the science, the anatomy of insects and the principles of their classification. It affords, as well, a more detailed study of the important groups. Not open to freshmen. Professor WICKHAM.

Monday, Tuesday, Wednesday, and Thursday.

B. COURSES OPEN TO UNDERGRADUATES AND GRADUATES

7. MICROSCOPIC ANATOMY OF VERTEBRATES. 3 hrs.

A course primarily for the thorough study of the microscopy of the tissues and organs of the adult mammal. The biological problems involved are given due attention through the study of histogenesis and the tracing of the specialization of important structures in the vertebrate series. Laboratory work, accompanied by lectures, demonstrations, and assigned reading. This course must be supplemented by one or more laboratory periods of course 71. Prerequisite, course 1 (2), or the equivalent. Professor HOUSER; Dr. STROMSTEN; Miss JEWELL.

Tuesday, Thursday, and Friday, two hours each; lectures at 10:05.

71. VERTEBRATE MICROLOGY. 1, 2, or 3 hrs.

Laboratory work introductory to the principles and methods of preparing material for study with the microscope. To this end, the student applies to vertebrate structures the several processes necessary, but emphasis is placed more especially on fixation, imbedding, sectioning, staining, and mounting. The training in technique given by this course is of the utmost value to those continuing any branch of biological study, being essential to the full and profitable use of laboratory facilities. Prerequisite, course 1 (2). Professor HOUSER; Dr. STROMSTEN; Miss JEWELL.

One, two, or three laboratory periods of two hours each per week; lecture Monday at 10:05.

8. EMBRYOLOGY OF VERTEBRATES. 4 hrs.

Lectures on the comparative embryology of vertebrates, supplemented by required reading. Demonstrations and practical studies of germ-cells, oögenesis, spermatogenesis, fertilization of the ovum, cleavage of the fertilized egg, develop-

ment of the germ-layers, and formation of the embryo. After the first of April, the laboratory work consists of the preparation and study of the chick at successive stages of development during the first five days of incubation, with contributory studies from the lower vertebrates. Prerequisite, course 71. Professor HOUSER; Dr. STROMSTEN; Miss JEWELL.

Monday, Tuesday, Thursday, and Friday, two hours each; lectures at 10:05.

82. VERTEBRATE EMBRYOGENY. 1 or 2 hrs.

Laboratory work supplementary to that regularly forming a part of course 8. Here opportunity is given for the study in greater detail of the assumption of body-form in the vertebrate, and for the tracing of the anlagen of the chief organs in a wider series of vertebrates. This work is open only to those who are pursuing course 8 or who have completed its equivalent. Prerequisite, course 71. Professor HOUSER; Dr. STROMSTEN; Miss JEWELL.

One or two laboratory periods of two hours each per week.

84. LECTURES ON EMBRYOLOGY. 2 hrs.

By obtaining special permission of the lecturer, the lectures of course 8 may be taken apart from the laboratory work. Prerequisite, course 1 (2), or the equivalent. Professor HOUSER.

9 (10). GENERAL ZOOLOGY. 2 hrs.

This is essentially a lecture course to be illustrated by abundant material from the museum supplemented by lantern slides. It has the double purpose of furnishing a general survey of the field of zoological science for those students who have no present intention of specializing in this field, and of furnishing a bird's-eye view as an introductory course to those who intend to take further work in the department, especially in comparative, systematic and speculative zoology.

The course is intended to be coördinate with BOTANY 9 (10). The courses in general zoology and general botany may be taken in combination by those who desire a brief survey of biological science, and thus constitute a combination course of four hours per week. Open to all students, except freshmen. Professor NUTTING.

Wednesday and Friday.

11 (12). PRACTICAL ZOOLOGY.**2 hrs.**

The study of injurious and beneficial species of animals of all classes, with special reference to the principles involved in the problems of control or preservation. Open to all students except freshmen. Professor WICKHAM.

Tuesday and Thursday, at 11:00.

13. THE ANIMAL CELL.**2 hrs.**

Lectures, reading, and laboratory studies. The lectures treat of the rise and development of the cell-theory, the general morphology of the animal cell, the microscopical structure of living substance, the chemistry of protoplasm, the transformation of matter and energy in cell, the reproduction of the cell, the facts and theories of heredity, and the limiting conditions of life. The laboratory work is designed to accompany the lectures. The more important monographs in this field are utilized. Prerequisite, courses 71 and 8. Professor HOUSER and assistants.

Monday and Friday, at 9:00.

14. COMPARATIVE NEUROLOGY.**2 hrs.**

A course for the more thorough study of the structure and physiology of the nervous system. The scope of the work includes a review of the general phenomena of irritability, primitive nervous mechanisms, types of invertebrate nervous systems, the differentiation of nervous structures in the vertebrate series, and the architecture of the mammalian nervous system. The topics are presented by lectures and demonstrations, anatomical work, and microscopical studies employing modern neurological technique. Prerequisite, courses 71 and 8. Professor HOUSER and assistants.

Monday and Friday, at 9:00.

15 (16). LECTURES ON SPECULATIVE ZOOLOGY.**2 hrs.**

This course is devoted to a presentation of the more prominent theories concerning the origin and the development of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts and intelligence of animals. Open to juniors, seniors, and to

sophomores who have taken not less than 4 hours' work in the department. Professor NUTTING.

Tuesday and Thursday.

17 (18). EXPERIMENTAL BIOLOGY.

2 hrs.

An advanced course for the more precise study of the relations between the animal organism and its environment. Laboratory work, references to special monographs, and the preparation of written reports. The experimental work involves a study of: (a) the effects upon protoplasm of chemical and physical agents; (b) the factors which determine the course of development; (c) the phenomena of regeneration in representative forms. Prerequisite, courses 71 and 8. Professor HOUSER.

Two laboratory periods weekly.

19 (20). SYSTEMATIC ZOOLOGY.

A laboratory course during which the student may become thoroughly acquainted with some definite group of animals, several of which are now sufficiently represented in our museum to make systematic work profitable to the student. The literature in the departmental library will be extensively used in this course. Prerequisites, courses 1 (2), or 3, 4, or 5 (6). Professor NUTTING.

Throughout the year, as arranged.

21 (22). ENTOMOLOGICAL METHODS.

Instruction in methods of collecting, mounting and preserving insect specimens. A certain amount of field work will be required in this course, which is intended to supplement that in General Entomology. Professor WICKHAM.

Hours as arranged; credit in accordance.

23 (24). COMPARATIVE ANATOMY OF VERTEBRATES.

2 hrs.

This course is designed for those who are especially interested in the problems of vertebrate anatomy; it may be made introductory to research or to the field of human anatomy. Anatomical and microscopical studies of the protochordates, exemplified by *Amphioxus*, a tunicate, and *Balanglossus*; followed by the dissection of *Petromyzon*, *Mustelus*, the skate, cat-fish, *Necturus*, the frog, the turtle, the pigeon, and the

rabbit. Lectures and reviews, with reading from Wiedersheim's *Comparative Anatomy of Vertebrates*, Gegenbaur's *Vergleichende Anatomie*, and other works. Prerequisite, courses 7 and 8. Dr. STROMSTEN and assistants.

One lecture and one laboratory period weekly.

25 (26). INVERTEBRATE EMBRYOLOGY. 2 hrs.

Reading, conferences, and laboratory studies introductory to the development of chosen invertebrates. This course, while general in its scope, is particularly helpful to those expecting to pursue work at seaside laboratories. The course is based on Korschelt and Heider's *Text-Book of the Embryology of Invertebrates*, but the student is encouraged throughout to refer to original sources so far as these are accessible. Prerequisite, courses 7, 8 and 13. Professor HOUSER.

C. COURSES PRIMARILY FOR GRADUATES

27 (28). SEMINARY IN ANIMAL BIOLOGY. 1 hr.

Weekly meetings of the instructors and advanced students in laboratory courses for the presentation of papers, the review of literature, and informal discussions. The primary object is to acquaint those devoting especial attention to animal biology with some of the aims and problems of current investigation. Professor HOUSER.

29 (30). RESEARCH IN SYSTEMATIC ZOOLOGY.

This differs from course 19 (20) in that original work resulting in original results will be expected. Prerequisites, courses 1 (2) and 3, 4, or 19 (20). Professor NUTTING.

31 (32). RESEARCH IN ANIMAL BIOLOGY. 5 hrs.

Original investigation of a specific problem in animal biology. The subjects assigned for research will be in experimental biology, cytology, neurology, and embryology. For graduate students having the requisite preliminary training in biological work. Professor HOUSER.

33 (34). RESEARCH IN ENTOMOLOGY.

Prerequisite, course 5 (6), in addition to such other

work in the department as may be accepted as suitable preparation. Professor WICKHAM.

35 (36). RESEARCH IN SPECULATIVE OR PRACTICAL ZOOLOGY.

This course is intended to be coördinate with courses 29 (30); 33 (34). Professor NUTTING; Professor WICKHAM.

MILITARY SCIENCE AND PHYSICAL TRAINING

MILITARY SCIENCE AND TACTICS

LIEUTENANT WEEKS

Instruction in these branches is prescribed for all male students in the Colleges of Liberal Arts and Applied Science, during the first and second years of residence, except such as are especially exempted. Students, who for valid reasons desire to be excused must submit their reasons in writing to the military committee of the faculty on the first Saturday after the opening of the semester. Persons who have failed to do this after the first five regular meetings of the battalion, are subject to suspension from all classes in the university.

Those claiming exemption on account of physical disability must present to the committee a certificate from the battalion surgeon, and those desiring credit for work at some recognized military institution must present to the commandant their credentials at this time. Students entering the University for the first time with junior or senior standing are not required to take this course, but may register for it if they so desire.

All students not excused as above provided will report for duty to the commandant at the armory at 4:20 p. m. on the first Tuesday in October.

ORGANIZATION

The department is organized for instruction into an infantry battalion, consisting of five companies, a band, and the requisite staff officers. The commissioned officers are selected from the seniors and juniors, the sergeants from the juniors and sophomores, and the corporals from the sophomores and freshmen. The selection is based on the military record of

each individual as evidenced by punctuality and regularity in attendance, for both practical and theoretical instruction, military bearing in and out of ranks, and general aptitude manifested for the work.

UNIFORM

Uniforms will be worn on all occasions of military duty. Combinations of uniform and civilian clothing are strictly forbidden.

New students entering at any time will be required to take steps at once to provide themselves with the prescribed uniform.

Officer's Coat,—Blouse of cadet gray material, similar in pattern to West Point Fatigue blouse with regulation shoulder straps with black field. Metal collar ornaments will be worn by officers.

Officer's Trousers,—Of same material as blouse and same pattern as West Point Fatigue.

Enlisted Men's Uniform,—Same as Officers' without shoulder straps or collar ornaments.

Cap,—For officers and men, of cadet gray material, bell crowned with the word IOWA embroidered on the front. Officers will wear a cap device under the IOWA, and men will wear the letter of the company to which they belong. Officers will wear a gilt cap cord, men will wear black.

Gloves,—White cotton or lisle thread gloves, worn by all cadets at every formation.

COURSES OF INSTRUCTION

Courses of instruction are both practical and theoretical. The practical course is as follows: Infantry Drill Regulations through the School of the Battalion in close and extended order. The ceremonies of battalion review, inspection, parade, guard-mounting, and escort to the color. Infantry target practice and guard duty. The practical instruction for infantry drill will be given two hours a week on Tuesdays and Thursdays, during the year, from 4:30 to 5:30 P. M.

Theoretical instruction will be given for one hour a week

during the entire year. All students, required to take military drill must register for the following courses in their order. Classes will be arranged to suit the necessities of the students.

Military Science I. Consisting of *U. S. Infantry Drill Regulations and Manual of Guard Duty.*

Military Science II. *U. S. Infantry Drill Regulations.*

Military Science III. *Firing Regulations for Small Arms.*

Military Science IV. *Field Service Regulations.*

Two semester credits will be allowed for each year of military work, provided at least two full years of the course be taken, but no student shall receive more than six semester credits for military work.

The four credits allowed for the required military course are essential to graduation, and students who for any reason, are excused from this work are required to register for physical training. Students, who are excused from both military drill and physical training are deemed to have postponed this work to a subsequent year.

ORGANIZATION OF THE MILITARY DEPARTMENT 1906-1907

CHARLES W. WEEKS, 1st Lieut. 30th Infantry, *Commandant.*

FIELD AND STAFF

E. E. Rorick.....*Cadet Adjutant.*
W. H. Duncan.....*Cadet Quartermaster*
R. J. Cook.....*Cadet Sergeant Major*

BAND

Henry G. Cox.....*Director*
J. E. Burgy.....*Cadet Drum Major.*

COMPANY "A"

R. C. Kramer.....*Cadet Captain.*
W. L. Myers.....*Cadet 1st Lieutenant.*
J. S. Beem.....*Cadet 2nd Lieutenant*

COMPANY "B"

D. C. Rhynsberger.....*Cadet Captain*
 G. A. Bemis.....*Cadet 1st Lieutenant.*
 L. P. Elliott.....*Cadet 2nd Lieutenant.*

COMPANY "C"

R. J. Glass.....*Cadet Captain*
 R. A. Oliver.....*Cadet 1st Lieutenant.*
 R. B. Pike.....*Cadet 2nd Lieutenant*

COMPANY "D"

I. C. Hastings.....*Cadet Captain.*
 P. D. Macbride.....*Cadet 1st Lieutenant.*
 J. M. Boland.....*Cadet 2nd Lieutenant.*

COMPANY "E"

O. J. Emmons.....*Cadet Captain.*
 F. H. Arnold.....*Cadet 1st Lieutenant.*
 W. E. Sloat.....*Cadet 2nd Lieutenant*

MILITARY FIELD DAY, MAY 21st, 1906

The "Coast Sword," awarded annually to the captain of the best drilled company, was won by Captain L. W. Lovell, Company "A".

The "Colonel Burnett Medal" for superiority in marksmanship for 1906, was awarded to Cadet Private Earl Kelty, Company "D".

The "H. J. Wieneke Medal," to captain of second best drilled company, won by Captain W. D. Middleton, Company "B".

The "C. Yetter Medal" No 1, for the best drilled junior, was awarded to Cadet Sergeant Major E. E. Rorick.

The "C. Yetter Medal" No 1, for the best drilled sophomore, was awarded to Cadet Sergeant J. B. Saylor, Company "D".

The "Sueppel Medal", for the best drilled freshman, was awarded to Cadet Private Charles Penningroth, Company "A".

JUDGES OF COMPETITIONS

Major William A. Mann, General Staff U. S. Army, judged the company drills, and Major R. P. Howell and Captain George W. Ball, 54th Iowa National Guard, judged the individual competitions.

PHYSICAL TRAINING AND ATHLETICS

MR. RULE, MISS KASTMAN, MR. CATLIN

The department of physical training offers excellent opportunities to the students of the University for physical education and development and endeavors to combine gymnastic and athletic interests. The new armory and athletic pavilion is thoroughly equipped with the best and most modern apparatus, and offers every inducement for training in gymnastics and outdoor athletics. It is well provided with baths, lockers and dressing rooms. A separate room containing lockers, baths, and other equipment has been set apart for the athletic teams. The floor of the main room of the building is used for both military drill and physical training. This room is 77x125 feet, contains an indoor baseball cage and nets, four basket ball fields, a tennis court, hand ball courts, two indoor baseball fields, and is surrounded by a concave, composition cork covered track six feet wide and fifteen laps to the mile. Every opportunity is offered for the development of mid-winter and spring sports.

All students excused from military science and tactics are required to take physical training. Four hours credit is given for two years' work, as in the military department.

Volunteer classes will be organized to meet three times a week. The privilege of entering these classes is extended to all students of all the colleges of the University.

A physical examination is required of all first-year men. A record is kept of the development of all students registered in this department. Special work is assigned those needing

particular attention. The work of the classes is varied and is recreative, its intent being the development of strong healthy bodies.

A thorough knowledge of the care of the body and preparation for the teaching of physical training is taught. A course in the theory of physical training may be chosen from the work offered by the College of Liberal Arts. The practice of physical training is taught on the athletic field and in the pavilion.

For the benefit of those who expect to use this knowledge in teaching, a statement showing the work done in theory and practice will be issued by the department.

PHYSICAL TRAINING FOR WOMEN

Close Hall contains a finely equipped gymnasium for the exclusive use of the women attending the University. In connection with the main gymnasium room are dressing rooms, shower baths, and 192 lockers.

The apparatus consists of chest weights, traveling rings, flying rings, ladders, vaulting bars, dumb bells, Indian clubs, wands, bounding balls, basket balls and medicine balls. Music is used in all class drills.

The aim and purpose of the work is general physical development, to promote health, grace, and poise of bearing. The training is not confined to one system but selects the best elements of all the different systems, as taught by the Sargent Normal School of Physical Training.

The gymnasium suit for women requires four yards of double-width (54 in.) black brilliantine or serge, and consists of three pieces. Butterick's pattern, No. 4509, may be used as a guide in making the suit. Gymnasium shoes are also required.

The work is demanded of all first and second year students. Each student is given a careful physical examination, that the work may be adapted to individual needs, and that no student may have more work than she is physically able to do.

Credit to the amount of four semester hours may be earned in physical training, provided the student does not less than two full years' work in this department.

All classes will meet on scheduled time in Close Hall gymnasium at the opening of the first semester. Four semester hours' credit is given for two years' work in this department.

ACCREDITED HIGH SCHOOLS

ACCREDITED HIGH SCHOOLS

The Board of Regents has adopted the following plan for general high school inspection:

1. Any school may be placed upon the accredited list upon application of its superintendent or principal and its board of directors, provided the faculty of the College of Liberal Arts is satisfied as to its (a) course of study, (b) methods of teaching, (c) facilities for instruction.

2. The course of study of such a school must be adapted to fit its graduates for one or more of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. All accredited schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

4. The authorities of accredited schools should report annually to the University all changes made in the courses of study and submit a list of names of the instructors employed in the high school, with subjects taught by each.

The following revised rules governing the accrediting of high schools have been adopted by the faculty of the College of Liberal Arts, and are now in force. The attention of the authorities of accredited schools is called to the revised rules in order that they may make such changes in their courses of study and in their plans of work as will enable them to conform fully to the rules.

RULES GOVERNING THE ACCREDITING OF HIGH SCHOOLS

High schools meeting the following conditions may, at the option of the faculty of the College of Liberal Arts, be accred-

ited as making full preparation for one or more collegiate courses; and students who have completed the work of such schools will be admitted to the University without being subject to examination in those preparatory subjects for which proper certificates are presented.

1. The course of study should be not less than four years of thirty-six weeks each in length, following an elementary course not less than eight years in length.

2. The course of study should require of each pupil not more than four recitations daily.

3. The entire time of at least three teachers should be given to instruction in the branches of the high school.

4. The quality of the instruction given and the character of the text-books used should be approved by the faculty.

5. Schools seeking considerable credit in science should demonstrate their ability to do successful laboratory work.

6. Schools seeking considerable credit in history and English should give evidence of a special library equipment for teaching these branches.

Private academies, seminaries, normal schools, or other secondary schools meeting the conditions mentioned above, or their equivalent, may be accepted on the same basis as high schools.

The University, for the present, does not publish a list of accredited schools, but each school accredited will be kept informed of its standing with the University.

THE GRADUATE COLLEGE

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.

PRESIDENT.

LAENAS GIFFORD WELD, M. A.

DEAN; Professor and Head of the Department of Mathematics.

PROFESSORS

AMOS NOYES CURRIER, LL. D.

Professor and Head of the Department of Latin Language and Literature, and Dean of the College of Liberal Arts.

SAMUEL CALVIN, PH. D., LL. D., F. G. S. A.

Professor and Head of the Department of Geology.

THOMAS HUSTON MACBRIDE, PH. D.

Professor and Head of the Department of Botany.

CHARLES BUNDY WILSON, M. A.

Professor and Head of the Department of German Language and Literature.

CHARLES CLEVELAND NUTTING, M. A.

Professor and Head of the Department of Zoology, and Curator of the Museum of Natural History.

ISAAC ALTHAUS LOOS, LL. D.

Professor and Head of the Department of Political Economy and Sociology; Director of the School of Political and Social Science.

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.

Professor and Head of the Department of Chemistry and Toxicology.

WALTER LAWRENCE BIERRING, M. D.

Professor of Theory and Practice and Clinical Medicine, and Vice-Dean of the College of Medicine.

WILLIAM CRAIG WILCOX, M. A.

Professor of American History, and Head of the Department of History.

GILBERT LOGAN HOUSER, PH. D.

Professor of Animal Biology, and Director of the Zoological Laboratories.

BENJAMIN FRANKLIN SHAMBAUGH, PH. D.

Professor and Head of the Department of Political Science.

LEE WALLACE DEAN, M. S., M. D.

Professor of Ophthalmology, Otology, Rhinology, and Larynology,
and Director of the University Hospital.

CLARK FISHER ANSLEY, B. A.

Professor and Head of the Department of English.

LEONA ANGELINE CALL, M. A.

Professor of Greek Language and Literature.

HENRY EVARTS GORDON, M. A.

Professor of Public Speaking.

FREDERICK ELMER BOLTON, PH. D.

Professor and Head of the Department of Education; Director
of the Summer Session.

BOHUMIL SHIMEK, C. E., M. S.

Professor of Physiological Botany, Professor of Botany in the
College of Pharmacy, and Curator of the Herbarium.

FRANKLIN HAZEN POTTER, M. A.

Professor of Latin.

CARL EMIL SEASHORE, PH. D.

Professor of Psychology, and Head of Department of Philosophy
and Psychology.

HARRY GRANT PLUM, PH. D.

Professor of European History.

HENRY FREDERICK WICKHAM, M. S.

Professor of Entomology, and Assistant Curator of the Museum
of Natural History.

†**FRANK ALONZO WILDER, PH. D.**

Professor of Petrology, Economic Geology, and Mining.

ARTHUR GEORGE SMITH, M. A.

Professor of Physics and Mechanics.

JOHN THOMAS MCCLINTOCK, B. A., M. D.

Professor of Physiology.

HENRY ALBERT, M. S., M. D.

Professor of Pathology and Bacteriology.

GEORGE TOBIAS FLOM, PH. D.

Professor of Scandinavian Languages and Literatures, and Acting
Professor of English Philology.

ARTHUR HILLYER FORD, B. S., E. E.

Professor and Head of the Department of Electrical Engineering.

†Absent on leave.

KARL EUGEN GUTHE, PH. D.

Professor and Head of the Department of Physics.

ERNEST LINWOOD OHLE, B. S., M. E.

Professor of Steam Engineering, and Head of the Department of Mechanical Engineering.

FOREST CHESTER ENSIGN, M. A.

Professor in Education, and Inspector of High Schools.

EDWIN DILLER STARBUCK, PH. D.

Professor of Philosophy.

CHARLES HEALD WELLER, PH. D.

Professor of Greek and Archæology, and Acting Head of the Department of Greek.

STEPHENS HAYES BUSH, A. M.

Acting Professor in Charge of Romance Languages.

ASSISTANT PROFESSORS

FREDERICK BERNARD STURM, B. A.

Assistant Professor of German.

CLARENCE WILLIS EASTMAN, PH. D.

Assistant Professor of German.

HERBERT CLIFFORD DORCAS, M. A.

Assistant Professor of Education, University Examiner and Registrar.

CARL LEOPOLD VON ENDE, PH. D.

Assistant Professor of Chemistry.

WILLIAM JAY KARSLAKE, PH. D.

Assistant Professor of Chemistry.

HENRY LE DAUM, M. A.

Assistant Professor of Romance Languages.

FRANK EDWARD HORACK, PH. D.

Assistant Professor of Political Science.

PAUL SKEELS PEIRCE, PH. D.

Assistant Professor of History.

FRANK DE WITT WASHBURN, A. B.

Assistant Professor in Charge of Fine Arts.

ROBERT BRADFORD WYLIE, PH. D.

Assistant Professor of Botany.

INSTRUCTORS

SAM BERKLEY SLOAN, B. A.

Instructor in English.

PERCIVAL HUNT, M. A.

Instructor in English.

ANFIN EGDALL, B. S., M. D.

Instructor in Pathology and Bacteriology.

EDWIN FORD PIPER, M. A.

Instructor in English.

HUGO WILHELM KOEHLER, B. A.

Instructor in German.

FRANK ALBERT STROMSTEN, D. SC.

Instructor in Animal Biology.

RICHARD PHILIP BAKER, B. SC.

Instructor in Mathematics.

FREDERICK WILLIAM BAILEY, M. S., M. D.

Instructor in Ophthalmology, Otology, Rhinology, and Larynology.

CHARLES DELOS POORE, A. C.

Instructor in Chemistry.

LEE PAUL SIEG, M. S.

Instructor in Physics.

LEWIS HENRY HANEY, PH. D.

Instructor in Economics.

FRED JAMES LONGWORTH, A. C.

Instructor in Chemistry.

PHILIP SHERIDAN BIEGLER, B. S., E. E.

Acting Instructor in Descriptive Geometry and Drawing.

HUGH STRAIGHT BUFFUM, PH. D.

Acting Instructor in Education.

RUDOLPH ERNST KLEINSORGE, B. S.

Assistant Instructor in Physiology.

CLARENCE WYCLIFFE WASSAM, M. A.

Assistant Instructor in Political Economy and Sociology.

DANIEL STARCH, PH. D.

Assistant Instructor in Philosophy.

PAUL FREDERICK EDINGER, B. A.

Assistant Instructor in Geology.

**THE ADMINISTRATIVE COUNCIL OF THE GRADUATE
COLLEGE**

Dean WELD, Chairman; Professor ANSLEY, Secretary;
Professors BIERRING, NUTTING, ROCKWOOD, WILCOX, WILSON.

GRADUATE FELLOWS AND SCHOLARS

SAMUEL WILLIAMSON COLLETT, B. S.

Fellow in Botany.

MARY KATHRINA HEARD, Ph. C., B. Ph., M. D.

Fellow in Ophthalmology and Otology.

STELLA ELIZABETH GILMOUR LOWMAN, B. PH.

Fellow in Latin.

DAVID JAMES McDONALD, M. A.

Fellow in Education.

HERMAN CHARLES MAIN, B. A.

Fellow in French.

JOHN CARL PARISH, M. A.

Fellow in Political Science.

ARTHUR LAWRENCE TATUM, B. A.

Fellow in Chemistry.

CHARLES DAVID WOOD, B. S.

Fellow in Physics.

CHARLES ELMER CAVE, B. A.

Scholar in German.

ELLEN GEYER, B. PH.

Scholar in English.

JOHN ROY HOATS, A. B.

Scholar in Geology.

HARRY MORGAN IVINS, B. S.

Scholar in Animal Biology.

SADIE JACOBS, B. A.

Scholar in Public Speaking.

SUSAN GRACE JEWELL, B. A.

Scholar in Zoology.

ELISABETH JOHNSON, PH. B.

Scholar in German.

CARL WILLIAM KNAPP, B. A.

Scholar in Zoology.

JAMES ASA MARMON, B. A.

Scholar in English.

RUTH MARIA MARSH, B. A.

Scholar in Sociology.

MINNIE EMILY ORMEROD, B. PH.

Scholar in Psychology.

HENRIETTA PRENTISS, B. A.

Scholar in Zoology.

MILDRED PRICE, B. A.

Scholar in Greek.

AGNES CLARISSA RALPH, B. L.

Scholar in Physics.

CLYDE ORVAL RUGGLES, B. A.

Scholar in Economics.

FRANK ORION SMITH, B. A.

Scholar in Education.

RUBY CLARE WADE, B. A.

Scholar in English.

MARY LOUISE WOODS, B. A.

Scholar in Botany.

THE ADMINISTRATION OF THE GRADUATE COLLEGE

The excellent opportunities offered by the State University of Iowa for the pursuit of advanced studies in various branches of knowledge have from the first attracted considerable numbers of college graduates to the institution. As the opportunities for advanced study multiplied, the number of such students became larger, and several of the departments found it expedient to offer courses specially designed for graduates.

The first step toward the development of a graduate college was taken in 1888, when the practice of conferring the degree of Master of Arts upon all bachelors of three years' standing who had been engaged in professional or literary work was definitely discontinued. In 1893 the graduate work of the University had become of such importance as to warrant the appointment of a standing committee for its supervision and for the definition of the terms upon which the degrees of Master of Arts and Master of Science might be conferred. The policy inaugurated by this committee differed but little from that in operation at the present time and its effect was immediate and salutary. The number of advanced courses open to graduates steadily increased and the facilities for successfully prosecuting special work were greatly improved.

In 1898 applications for admission to candidacy for the degree of Doctor of Philosophy were for the first time accepted and then only from graduate students in residence at the University. The question of accepting non-resident candidates for the degrees of Master of Arts and Master of Science was settled in 1899 when, upon the recommendation of the standing committee on graduate students, it was voted by the faculty that no candidate *in absentia* would be accepted after

October 1, 1900, and that all such existing candidacies should lapse in June, 1903.

The Graduate College was instituted by action of the board of regents on June 7, 1900. Besides recognizing the college and appointing a dean, the board established certain fellowships and scholarships, the number of which has been increased from year to year. The first annual announcement was issued in August, 1900.

A council of seven members, appointed by the president of the University, coöperates with the dean in the administration of the college.

ADMISSION

Any person known to be a graduate in good standing of an accredited college of liberal arts will be admitted to the Graduate College. Admission to specific courses of study to be taken in candidacy for an advanced degree, however, can only be granted upon the recommendation of the respective professors in charge of such courses.

In regard to charges see under TUITION AND EXPENSES.

FELLOWSHIPS AND SCHOLARSHIPS

For the coming academic year there will be available about twenty-five fellowships and scholarships in the Graduate College of the State University of Iowa.

Attention is called to the scholarships in Iowa colleges offered each academic year. The regulations governing these scholarships are given below.

The value of a fellowship is \$225 per year and that of a scholarship \$125, with exemption from all University fees in each case. In general, a fellowship is granted only to graduate students of at least one year's standing, while a scholarship may be conferred upon graduation. Graduates of any accredited college of liberal arts are eligible.

FELLOWSHIPS AND SCHOLARSHIPS AT LARGE

Applications for graduate appointments must be made

to the president of the University upon blanks prepared for the purpose and obtainable from any member of the faculty. All applications, to be acted upon at the spring meeting of the board of regents, must be submitted before March 15th; those to be acted upon at the June meeting, before May 15th.

The following regulations are in force:

1. Each fellow or scholar will be required to pursue his studies under the direction of the professor in charge of his major or minor courses and to render to the University such services as may be required of him by the president in consultation with the professor in charge of his major course; it being understood that the maximum amount of service to be expected of a scholar shall be the *equivalent* of teaching three hours or of superintending laboratory work for six hours per week, while that required of a fellow may not exceed twice the above amount.

2. Each student holding a fellowship or a scholarship shall be in actual attendance throughout the academic year for which he is appointed, unless excused by the president and the head of his department.

3. The applicant for a fellowship or a scholarship will be expected to demonstrate his capacity for original research and must give evidence of marked attainments in one or more lines of study. Testimonials from responsible persons as to the general worthiness of the candidate must accompany the application, but no appointment to a fellowship may be made upon recommendations not supported by specimens of the applicant's original work.

4. Each application for a fellowship or scholarship shall, if approved by the head of the department in which the appointment is sought, be referred by him to the council of the Graduate College. The council shall consider all applications thus approved and referred and submit a report to the graduate faculty recommending a list of appointments assigned to the several departments as equitably as may be, the relative qualifications of the several applicants having been accorded due weight. This report as amended by the faculty shall, upon the approval of the president, be transmitted to the board of regents or its executive committee for final action at the spring meeting.

A second assignment of fellowships and scholarships may be made in the same manner at the June meeting of the board.

5. All graduate appointments shall be for one year. Both fellows and scholars may be recommended for re-appointment at the discretion of the council, but for a second year only.

6. Any graduate appointment may be withdrawn at any time upon the concurrent recommendation of the president of the University and the head of the department in which the appointment is held.

SCHOLARSHIPS IN IOWA COLLEGES

At the meeting of the board of regents of January 7th and 8th, 1904, the following regulations with respect to scholarships in Iowa colleges were formally adopted:

1. Until further notice one scholarship in the Graduate College of this University is hereby established in each of the "standard colleges" of Iowa. For the year 1904-5 those institutions officially recognized by the college section of the Iowa State Teachers' Association will be regarded as standard colleges.

(Subsequent action of the board of regents has specified a list of sixteen colleges in which these scholarships are now established.)

2. Said scholarships shall entitle the student while holding the same to an annual stipend of one hundred and twenty-five dollars (\$125.00), besides free tuition, in the Graduate College.

3. Said scholarships are to be awarded annually as follows: The faculty of each college entitled to such scholarship shall be asked to certify, through its president, on or before March 15th of each year, to the president of this University, the name of two or more students who have received the baccalaureate degree from said college within two years prior to that date, or who will receive the said degree from that college at the close of that collegiate year, as being the persons whom they nominate as candidates for said scholarship in this University for the ensuing scholastic year. Of the candidates thus nominated it is contemplated that at least one shall desire to pursue, and shall have shown marked fitness for grad-

uate work under the faculty of science; and one, likewise, under the faculty of letters.

4. Upon receipt of such nominations this University shall award the scholarship for said college to one of the candidates thus recommended, to be held during the ensuing academic year, provided any one of the candidates meets all the conditions governing the appointment of scholars by this University (see above). The University reserves the right to provide against the undue overcrowding of any one department or group of departments by such scholars. In case any college fails to nominate candidates who meet such requirements within the time above indicated or in case the appointment fails of acceptance, this University may consider applications from other graduates of said college for the vacancy thus created or, at its discretion, withdraw the scholarship for that year.

5. Appointments to these scholarships are for one year and may be renewed for a second year only. The first award under these regulations shall be made for the academic year 1904-5.

6. The parties to whom these scholarship are awarded shall, while receiving the benefits therefrom, remain in residence in this University, shall perform such services in the libraries and laboratories and upon the instructional staff as may be assigned to them, and shall be subject to all other regulations governing fellows and scholars in the Graduate College.

7. In case any student while holding such scholarship fails to remain in residence and pursue his studies the whole of the scholastic year, then he shall receive only a proportional part of the stipend attached to such scholarship for said year.

ADVANCED DEGREES

The Graduate College confers the following degrees. Master of Arts, Master of Science, and Doctor of Philosophy. The requirements for these degrees are fully explained below.

MASTER OF ARTS AND MASTER OF SCIENCE

The degree of Master of Arts, or of Master of Science,

will be conferred upon resident graduates under the following conditions:

1. The candidate must be a graduate of this University, or of an accredited university or college.

2. He must have pursued, during one or more years, a course of graduate study at this University, covering one major and one minor subject; in a two year course, one major and two minors being allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned and to be subject to the approval of the faculty.

3. In all cases the minor or minors must be closely allied to the major subject; provided, however, that any candidate in residence for two or more years may select a modern language as a second minor in his course.

4. The candidate must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the faculty for approval not later than the second Friday of December, and the thesis itself must be presented to the examining committee at a date to be set by the professor in charge of the thesis work, but not later, in any case, than May of the year in which the degree is expected.

5. He must, at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the faculty for this purpose.

6. Any person holding a baccalaureate degree from this or another institution of acceptable grade may be registered in the Graduate College as a candidate for an advanced degree while pursuing studies in any of the professional colleges of the University; but two years of such candidacy shall be necessary to fulfill the requirement of one year's residence, the time to be reckoned from the date of application for the advanced degree.

7. The degree of Master of Arts will be granted only upon the completion of a course mainly literary in character; the degree of Master of Science, after one mainly scientific.

MASTER OF SCIENCE IN MEDICINE

Students who, upon admission to the University, have presented preparatory work equivalent to the full requirement of the College of Liberal Arts and who have completed the four-years' course in medicine, may, upon the recommendation of the faculty of the College of Medicine, be admitted to the Graduate College as candidates for the degree of Master of Science in Medicine. Such students will be expected to select their major and minor subjects under the advice of the medical faculty. The terms upon which the degree will be granted are identical with those set forth above.

DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy will be granted under the following conditions:

I. Prerequisites.

1. The candidate must have received the bachelor's degree either from this institution or from some other of equal rank.

2. He must present evidence of having completed a satisfactory amount of undergraduate work in the subjects proposed for investigation for this degree.

3. He must possess a knowledge of French and German at least sufficient for purposes of research.

II. Conditions of Candidacy.

1. At least three years of graduate study will ordinarily be required. Of these, two must be in residence and the last year prior to receiving this degree must be spent at this University.

2. In making formal application for this degree the candidate shall select one major study and one or two minors. The minor study or studies shall be closely allied to the major and shall be such as, with it, to constitute a single field of research.

3. The application of the candidate setting forth the line of research proposed, shall be approved and endorsed by

the professor or professors under whose direction it is proposed to prosecute the work.

III. *Dissertation.*

1. On completion of his work the candidate shall submit to the faculty a formal dissertation which shall not only exhibit evidence of original research, but shall in itself be a contribution to the sum of human knowledge.

2. The dissertation must be in acceptable literary form; although its acceptance will depend chiefly upon the subject matter.

3. The subject of the proposed dissertation must be submitted to the faculty not later than the last Friday in September of the year preceding that in which the degree is expected; and a copy of the dissertation, printed or typewritten, must be in the hands of the secretary of the faculty not later than the 20th day of May of the year in which the degree is expected. In case the dissertation offered is accepted by the faculty and the candidate passes satisfactorily the examination provided for in the next section following, he shall, prior to receiving his degree, deposit with the librarian of the University one hundred printed copies of the dissertation so accepted.

IV. *Examinations.*

At such times as may be agreed upon by the candidate and the professors in charge of his work, he shall pass an examination, both oral and written; the examination to be conducted by the professors immediately concerned,—the written privately, the oral in the presence of the faculty. For purposes of this examination five members of the faculty of the Graduate College shall constitute a quorum.

ADVANCED DEGREES IN APPLIED SCIENCE

Students in the College of Applied Science receive upon graduation the degree of Bachelor of Science. Such graduates may become candidates for the advanced degrees conferred by the Graduate College upon the same terms and subject to the same regulations as graduates of the College of Liberal Arts. Advanced courses in engineering subjects will,

whenever possible, be arranged as called for, even when such are not already offered.

Professional degrees, such as Civil Engineer, Electrical Engineer, Mechanical Engineer, Engineer of Mines, etc., are granted to graduates of the College of Applied Science after four years of professional work, one of which must have been in responsible charge, and one of which may have been graduate work, in residence at the University. The candidate for a professional degree in engineering must be twenty-five years of age, and application for such degree should be made to the dean of the College of Applied Science.

COURSES OF INSTRUCTION

It is the aim of the University to furnish facilities for advanced study commensurate with the demand. No set courses of study leading to any of the advanced degrees are provided; each candidate for one of these degrees pursuing an independent line of study, in which regular university courses are usually combined with special research work, original in character, laid out with the advice of the professors, and carried out under their direction.

The elastic nature of the elective system here in operation renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The seminaries, for example, hold out encouragement and opportunities for much original study and research, as do also a number of the advanced courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In most cases courses intended primarily for graduates (C) are distinguished from those open also to undergraduates (B). To the former, undergraduates are admitted only under exceptional circumstances and subject to the discretion of the professor in charge of the work.

The courses intended only for undergraduates (A) are not given here, but may be found in the current announcement of the College of Liberal Arts. The numbers assigned to the graduate courses in any department are continuous with those designating the undergraduate courses.

Additional graduate courses will be arranged in connection with the Summer Session for the benefit of those unable to do

work in residence during the regular academic year. Details as to these courses are given in the current Announcement of the Summer Session or may be obtained by correspondence with the professors concerned.

BOTANY

PROFESSOR MACBRIDE; PROFESSOR SHIMEK, ASSISTANT
PROFESSOR WYLIE

General courses 1 (2), 5 (6), and 7 (8) are required as preliminary to graduate work in this department.

The facilities which the department affords are described above under the headings BOTANICAL LABORATORY and HERBARIUM.

For description of courses see pages 113 to 116.

CHEMISTRY

PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE, AS-
SISTANT PROFESSOR KARSLAKE, MR. POORE,
MR. LONGWORTH

Graduates of accredited colleges who have done the undergraduate work, comprising general elementary chemistry with laboratory work, introductory qualitative analysis, and introductory quantitative analysis, may become candidates for the degree of Master of Science.

The requirements for admission to the courses leading to the doctor's degree demand three years' preparatory work in chemistry and comprise a good knowledge of the following branches: general chemistry, physical chemistry, qualitative analysis, quantitative analysis, organic chemistry (including some experience in organic combustion and organic preparations), and outlines of chemical technology. A thorough course in physics is very desirable as a preparation for either of the advanced courses; and if, in any case, deficiencies exist in this respect they must be made up after entering, and a corresponding increase in the duration of course is to be expected. No

one will be encouraged to present himself for final examination without a certain maturity of thought and ability which does not depend altogether upon the time of study.

For description of courses see pages 119 to 126.

CLASSICAL ARCHAEOLOGY

PROFESSOR WELLER; ASSISTANT PROFESSOR WASHBURN

For description of courses see pages 126 to 128.

EDUCATION

PROFESSOR BOLTON; PROFESSOR ENSIGN, ASSISTANT
PROFESSOR DORCAS, DR. BUFFUM

The candidate for an advanced degree who elects education as a major should have taken as undergraduate work the equivalent of course 1 (2) and at least one other preceding 17 (18). Graduate work in education presupposes a general knowledge of psychology. Considerable previous work in biology and sociology is also desirable. The master's degree will not be conferred upon candidates who have not taken at least two full years' courses in the group beginning with 17 (18), and one or more years of seminary work. A satisfactory thesis must be offered in addition to the class work. To secure the degree of Doctor of Philosophy requires three years of graduate work.

The library of the department of education is well equipped with all the standard and many special pedagogical works. All the American educational journals of any importance, and many English, German, and French periodicals are on file. In all about forty journals are regularly received. The library is thoroughly equipped for graduate work in most lines of educational research. It is especially well equipped for work in educational psychology, philosophy of education, and child study.

For description of courses see pages 128 to 132.

ELECTRICAL ENGINEERING

PROFESSOR FORD; MR. BIEGLER

The courses given below, except 65 (66), are offered only as minors. Students taking these courses are required to have a knowledge of mathematics as given in group (A), and of physics, as given in course 3 (4).

For description of courses 53 (54a), 55 (56), 62a, and 46b see pages 324, 325.

65 (66). RESEARCH.

Opportunity for research in electrical engineering will be offered to qualified students in the Graduate College. Those wishing such work should consult the instructor. Professor FORD.

ENGLISH

PROFESSOR ANSLEY; PROFESSOR GORDON, PROFESSOR FLOM,
MR. PIPER, MR. SLOAN, MR. HUNT

Undergraduates who intend to become candidates for advanced degrees in English should emphasize this and related subjects in the work of the junior and senior years. Those who do not make the special preparation recommended find that more than the usual time must be given to the graduate course.

The requirements for a major in English literature, English language or public speaking may be learned by application to the head of the department. The preparation and the aims of the student are considered. For a minor in English courses should be chosen after conference with the head of the department and the professor in charge of the major. With the consent of the instructor, any course in the department is open to a graduate student; but only approved combinations of courses lead to advanced degrees.

Work not provided for in the courses announced is outlined and directed by instructors as needed.

For description of courses see pages 135 to 143.

FINE ARTS

, ASSISTANT PROFESSOR WASHBURN

Candidates for advanced degrees who wish to take graduate studies in the fine arts are expected to have pursued considerable work in this subject, as well as in literature and history. A general knowledge of the principles and laws of artistic expression, and some acquaintance with its historical development are required. Moreover, for admission to course 9 (10), which must be by permission of the instructor, evidence of marked proficiency and attainment in drawing and painting must be shown. No student is encouraged to elect advanced work in this department who has not a sufficient knowledge of languages to enable him to read French and German with facility.

For description of courses see pages 143 to 144.

GEOLOGY

PROFESSOR CALVIN; PROFESSOR WILDER, Mr. EDINGER

The geological field within reach of Iowa City and the geological collections and reference library belonging to the University afford ample opportunities for research work in geology. Courses can be arranged to meet the wishes of individual students. The following are outlines of some of the courses which may be chosen from the possible range of subjects available for graduate work.

For description of courses see pages 146 to 149.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON; ASSISTANT PROFESSOR STURM,
ASSISTANT PROFESSOR EASTMAN, MR. KOEHLER

All courses in German are offered every year except as otherwise indicated. Students are invited to consult with the instructors in arranging their work. Graduate students of German will find it to their special advantage to combine with

their work some of the courses offered in the Scandinavian and English departments.

The German library is particularly rich in history of German literature, the history of the German language, Goethe literature, Middle High German, Old High German, and possesses complete bound sets of the most important philological periodicals. It is conveniently arranged in the German seminar room, No. 103 in the Hall of Liberal Arts, adjoining the other rooms of the department.

For description of courses see pages 151 to 153.

GREEK LANGUAGE AND LITERATURE

PROFESSOR WELLER; PROFESSOR CALL

Candidates for advanced degrees are expected to have completed at least four years of work in Greek before undertaking the work of the graduate courses. The aim of these courses is to enlarge the student's view of the field in which he is working, to train him in correct methods of study and investigation, and to encourage him to pursue original research. In connection with each course the student is urged to read Greek authors both widely and accurately.

The departmental library contains the texts and more important annotated editions of classical authors. Sets of periodicals containing the results of philological and archaeological investigations are being placed on the shelves, a large number of the standard publications having been secured already. The University also has a considerable collection of photographs and lantern-slides, which are used to illustrate the courses in archaeology and literature.

Graduates who offer Greek as their major are expected to take Latin as a minor.

For description of courses see pages 154 to 155.

HISTOLOGY AND EMBRYOLOGY

PROFESSOR PRENTISS

As a prerequisite to advanced work in this department the

student will be required to possess a good working knowledge of both the methods and the subject matter of general histology and embryology. Two courses are offered as follows:

a. **THE EYE.**

The histology of its tissues, considered in relation to both their phylogenetic and their ontogenetic development. The structure and development of the retina is specially studied. Time to be arranged.

b. **THE EAR.**

The investigation will proceed along the same lines as in the preceding course.

HISTORY

PROFESSOR WILCOX; PROFESSOR PLUM

Students who wish to do graduate work in history will be expected to have done more than the average amount of undergraduate work in the subject. Graduate work is not intended to fill up gaps left in the student's undergraduate courses. All who intend to specialize in history should emphasize this subject before taking the bachelor's degree. Before anyone can be enrolled as a graduate student in this department the requisite amount of preliminary work must be completed, either before or after receiving the first degree. Those contemplating graduate work in history are urged to elect also courses in sociology, economics, and politics.

For description of courses see pages 157 to 159.

LATIN LANGUAGE AND LITERATURE

PROFESSOR CURRIER; PROFESSOR POTTER, PROFESSOR WELLER

The minimum prerequisite for work leading to an advanced degree is the full preparatory work and the undergraduate courses 7-12 inclusive, or their equivalent.

The library of the department is supplied with texts and the more important annotated editions of Latin and Greek authors and is freely open for the use of advanced students of the classics. The recent acquisition of the library of Dr. E. Poppe, of Burlington, Iowa, by gift of F. Q. Lowden, Esq.,

has added a large number of valuable Greek and Latin works to the collection available. Sets of the more important philological periodicals have been placed on the shelves and the number of these is being increased constantly by purchase. The library receives regularly nearly all of the principal philological and archæological journals.

The department is supplied with mounted photographs and lantern slides for the illustration of lectures.

For description of courses see pages 160 to 163.

MATHEMATICS

PROFESSOR WELD; MR. BAKER

The candidate for an advanced degree in mathematics must have completed one of the groups of undergraduate courses, (A), (B), (C), or (D), detailed statements of which will be found on page 164.

Graduates electing mathematics as a minor may, upon the recommendation of the professor in charge of the major subject, elect the second year's work in any one of the first three of the above groups.

Many of the courses outlined below may be taken by undergraduates specializing in mathematics. All graduate students in mathematics are expected to take an active part in the mathematical seminary; and every candidate for an advanced degree will be required to submit a thesis, prepared under the direction of his instructors, representing original investigation in either pure or applied mathematics.

For description of courses see pages 169 to 171.

MECHANICAL ENGINEERING

PROFESSOR OHLE

The following courses will be open to graduate students who have had the equivalent of courses 3 (4) in general physics and Group (A) in mathematics.

For description of courses 39, 43 (44), 36a, and 36b see pages 322, 323.

OPHTHALMOLOGY, OTOTOLOGY, RHINOLOGY, AND LARYNGOLOGY

PROFESSOR DEAN; DR. BAILEY

This department offers work suitable to candidates for advanced degrees. Its laboratories are well equipped with microscopes, microtomes and other instruments of investigation, and are amply provided with anatomical, histological and pathological materials. The graduate student will be given a desk in the laboratory and will have access to all available instruments and materials. He may also take advantage of the departmental clinics. His work will be personally supervised. Subjects for special research and for theses will be suggested by the head of the department as required.

PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL

Candidates for higher degrees may pursue advanced work or carry on original investigations in pathology or bacteriology. As a prerequisite to such work, the student will be required to have had at least one year's work in pathology or bacteriology.

Each student will be assigned a private laboratory and given the use of a good microscope, and supplied with the tissues and reagents necessary for the work of the course. Special courses may be arranged to suit the requirements of individual students.

The following regulations with respect to major and minor subjects are to be observed. When the major subject chosen is bacteriology, the minor subject should include either chemistry, or botany, or both; while, if the major is experimental or comparative pathology, the minor should comprise such subjects as anatomy, histology, animal morphology, physiology, botany, or psychology. Work in this department may also be elected as a minor.

12a. PATHOLOGICAL TECHNIQUE.

A laboratory course designed for those who desire to spe-

cialize in pathology. The work will include the principles and general methods employed in the investigation of such material as usually comes to the pathologist for diagnosis. Methods of conducting original research will also be carefully considered. The abundance of material in the laboratory especially adapted for pathological histology together with the fresh material constantly coming from the University hospitals, affords opportunity for the investigation of practically every variety of pathological tissue.

13. BACTERIOLOGICAL TECHNIQUE.

A laboratory course designed for advanced students and physicians who desire to specialize in bacteriology. The course is intended principally to prepare students for the duties of health officials. The work will include the technique necessary for every form of bacteriological analysis. The drill in practical work will be thorough and complete, to the end that graduates of the course may be competent and reliable bacteriologists. The number that may be enrolled is limited to six.

Twelve hours each week during the first semester, or twenty-four hours each week during the second quarter of the first semester.

PHILOSOPHY AND PSYCHOLOGY

PROFESSOR SEASHORE; PROFESSOR STARBUCK, DR. STARCH

This department offers opportunity for advanced study in psychology, history of philosophy, logic and metaphysics, ethics, aesthetics, and the history and philosophy of religion. Candidates for the degree of Master of Arts or Master of Science having the required preparation for advanced work may elect any one of these subjects for either a major or a minor course, subject to the rules for graduate students. Candidates for the degree of Doctor of Philosophy, while selecting one subject for special research, will be expected to gain a comprehensive knowledge of all the subjects in this group.

Candidates for advanced degrees in this department should have taken as undergraduate work in this institution, or in another of like rank, general elementary courses in psychology, logic, and ethics. An introductory course in the history of

philosophy is also desirable. Graduate students, not candidates for a degree, may take any course for which they are prepared, upon the approval of the instructor.

The departmental library is supplied with the standard works in philosophy, psychology, ethics, and logic, and with the bound volumes and current numbers of the leading philosophical and psychological journals.

A description of the laboratory and apparatus of the department may be found in this announcement under **PSYCHOLOGICAL LABORATORY**.

For description of courses see pages 173 to 175.

PHYSICS

PROFESSOR GUTHE; PROFESSOR SMITH, MR. SIEG

Students wishing to take physics as a minor should previously have pursued a course equivalent to the undergraduate courses 3 and 4 in general physics and should also have a good working knowledge of algebra, geometry, trigonometry, and, if possible, of plane analytical geometry. For those taking physics as a major, two years' work in physics, a knowledge of differential and integral calculus is necessary, and, in some cases, differential equations will be needed.

For description of courses see page 178.

PHYSIOLOGY

PROFESSOR MCCLINTOCK; MR. KLEINSORGE

Those wishing to take physiology either as a major or minor in a course leading to an advanced degree, should have, as preliminary, at least one year's work each in physics, chemistry, and morphology, including histological technique and human histology, and should have completed undergraduate courses in physiology. Suitable courses will be outlined to meet the requirements of each student, and special arrangements will be made in the physiological laboratory of the Col-

lege of Medicine to enable the student to carry on work of research.

1 (2). MAMMALIAN HEART PHYSIOLOGY.

This course will include research work upon the automaticity of the heart and upon the mechanism for the regulation of heart action.

3 (4). PATHOLOGICAL PHYSIOLOGY.

This will include the study of the physiological activity of some special organ of the body when in a pathological condition. The work will include the production of experimental pathological conditions and the resulting physiological action, and also the observation of clinical cases in the University Hospital.

POLITICAL ECONOMY AND SOCIOLOGY

PROFESSOR LOOS; ASSISTANT PROFESSOR PEIRCE, DR. HANEY,
MR. WASSAM

Candidates for advanced degrees who elect political economy, sociology or commerce as major or minor are requested to confer with the instructors in charge with reference to the suitable grouping of the courses here offered.

For description of courses see pages 180 to 185.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH; ASSISTANT PROFESSOR HORACK

Candidates for the degree of Master of Arts or Doctor of Philosophy in any of the lines of study covered by the department of political science are offered the following regular courses of instruction. Additional courses in the general field of politics will be outlined by the head of the department to meet the special demand of individual candidates.

For description of courses see pages 185 to 189.

ROMANCE LANGUAGES

ACTING PROFESSOR BUSH; ASSISTANT PROFESSOR LE DAUM

Aside from the general requirements for admission to the Graduate College, the candidate for an advanced degree pursuing either his major or his minor course in this department, must have completed undergraduate courses 1 to 6 inclusive, or their equivalent; that is, he is expected to know the essentials of French grammar, to be able to read modern French prose, and to translate English into French with fair ability.

For description of courses see pages 190 to 193.

SANSKRIT

PROFESSOR POTTER

For description of courses see page 193.

SCANDINAVIAN LANGUAGES AND LITERATURE

PROFESSOR FLOM

The Department of Scandinavian Languages and Literatures has charge of the courses of instruction and research in the University dealing with the Scandinavian languages. The courses offered include Norwegian, Swedish, Danish and Icelandic. It is the aim of the department to make the instruction comprehensive. The literary and the philological side of Scandinavian are given equal attention and opportunity for study is offered in both the earlier and the modern period. Attempt has been made to correlate the courses within the department, as well as with related work in other departments. Courses in the literatures of the four Scandinavian languages are offered for those who wish to study the literature of the Northern countries; or the languages and the literature of one member of the group may be taken in the whole period from Old Scandinavian down to the present time; or again in the more strictly linguistic aspect the Northern tongues as related to one another may be studied, Old Norse and Old Swedish

in their philological bearing as members of the Germanic group and the ethnic and linguistic conditions of primitive Scandinavia in its relation to the remainder of Indo-European territory. If the student wishes, opportunity is afforded to specialize in several directions. Students who elect Scandinavian as a major for a higher degree should choose their minors from the cognate courses of other language departments. The following are recommended to students: English 42, 65 (66), 71 (72), 73 (74), 75 (76), 81 (82), 91; German 11, 13 (14), 15, 16, 21 (22), 26; Sanskrit, 1 (2); Greek, 23 (24); Latin 37 (38), 35; French, 9 (10), 13 (14); Political Economy, 21 (22).

For a fuller statement of courses 1 (2), 3 (4), 5, 7 (8), 14 and 20 see Liberal Arts Announcement for 1906-1907 or Bulletin of the University of Iowa, New Series, No. 132.

For description of courses see page 195 to 197.

THEORY OF MEDICINE

PROFESSOR BIERRING

INTERNAL MEDICINE.

Candidates for advanced academic degrees may pursue research work in internal medicine in the laboratories of the College of Medicine. As a prerequisite to such work the student is required to have had at least two years of undergraduate work, comprising histology, embryology, general and physiological chemistry, physiology, pathology, and bacteriology. The department now has a fully equipped clinical laboratory which affords special facilities for the study of problems connected with internal diseases. When this subject is chosen as a major, it is suggested that the minor include either physiology, physiological chemistry, pathology, or bacteriology.

ZOOLOGY

PROFESSOR NUTTING; PROFESSOR HOUSER, PROFESSOR WICKHAM, DR. STROMSTEN

Two years' work in natural science, one of which shall

have been in zoology or animal morphology, is required as a preliminary to admission to graduate courses with zoology as a major.

One year's work in zoology, animal morphology, or botany is required for admission to graduate courses with zoology as a minor.

For description of courses see pages 199 to 204.

**THE SCHOOL OF POLITICAL
AND SOCIAL SCIENCE**

FACULTY AND INSTRUCTORS

GEORGE E. MACLEAN,
PRESIDENT.

ISAAC ALTHAUS LOOS, LL. D.
DIRECTOR; Professor and Head of the Department of Political
Economy and Sociology.

WILLIAM CRAIG WILCOX, M. A.
Professor of American History, and Head of the Department of
History.

BENJAMIN FRANKLIN SHAMBAUGH, PH. D.
Professor and Head of the Department of Political Science.

FREDERICK ELMER BOLTON, PH. D.
Professor and Head of the Department of Education, and Director
of the Summer Session.

CARL EMIL SEASHORE, PH. D.
Professor of Psychology, and Head of Department of Philosophy
and Psychology.

HARRY GRANT PLUM, PH. D.
Professor of European History.

FRANK EDWARD HORACK, PH. D.
Assistant Professor of Political Science.

PAUL SKEELS PEIRCE, PH. D.
Assistant Professor of History.

LEWIS HENRY HANEY, PH. D.
Instructor in Economics.

CLARENCE WYCLIFFE WASSAM, M. A.
Instructor in Education.

JOHN CARL PARISH, M. A.
Fellow in Political Science.

RUTH MARIA MARSH, B. A.
Scholar in Sociology.

CLYDE ORVAL RUGGLES, B. A.
Scholar in Economics.

THE SCHOOL OF POLITICAL AND SOCIAL SCIENCE

ORGANIZATION

The School of Political and Social Science, established by the board of regents in June, 1900, embraces the following departments of instruction: history, political economy, and sociology, including commerce and political science. It provides courses in ancient and modern history, in the several branches of economics, including commerce, finance, and statistics; in theoretical and practical sociology; and in political science including public law and jurisprudence.

AIMS

The aim of the School is to give a complete general view of all the political and social sciences, and to foster the further development of all their branches. Its more immediate and practical object is to prepare the students of the University for the intelligent exercise of the rights and duties of citizenship in a free commonwealth, and to fit them for the various branches of the public service and for the wider avenues of business. It aims furthermore to supplement, by courses in public law and comparative jurisprudence, the instruction in private municipal law given by the faculty of law, and to give to those who intend to make journalism their profession adequate training in historical, economic, and legal subjects. Finally, it aims to educate teachers of the several branches of political and social science.

STUDIES IN SOCIOLOGY, ECONOMICS, POLITICS, AND HISTORY

The faculty of political and social science are the editors of a series of studies in sociology, economics, politics and his-

tory, of which the following have so far appeared: Vol. 1, *Studies in the Politics of Aristotle, and the Republic of Plato*, by ISAAC ALTHAUS LOOS, The University Press, 1899; Vol. 2, No. 1, *The Early History of Banking in Iowa*, by FRED D. MERRITT, M. A., Ph. D., 1900; Vol. 2, No. 2, *The Development of Political Thought in Japan*, by KIYOSHI KAWAKAMI, 1903; Vol. 3, No. 1, *The Freedmen's Bureau*, by PAUL SKEELS PERCE, Ph. D., 1904; Vol. 3, No. 2, *The Teutonic Order and its Secularization*, by HARRY GRANT PLUM, Ph. D., 1906.

These publications are open to worthy contributions of advanced students in the subjects mentioned.

THE POLITICAL SCIENCE CLUB

The Political Science Club is devoted to the cultivation and advancement of the political and social sciences. The club has held regular meetings since October, 1896. A formal organization was effected in January, 1897. The club now holds fortnightly sessions from October to May each year. At these sessions papers are read by members or by invited guests, presenting the results of original investigation in some subject in any one of the following group of sciences: history, economics, sociology, politics, law, education, and ethics. The membership of the club is limited to the faculties of instruction in the several departments interested.

SYNOPSIS OF COURSES

GENERAL COURSE IN SOCIAL SCIENCE

First Year

The requirements are as laid down for the first year in the REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS as stated above.

Second Year

English, 3 hours; elective, 6 to 9 hours in economics, politics, and history; and from 3 to 7 hours in psychology, language, or science. At least four hours of mathematics or science must be elected in this or a subsequent year in addition to the eight hours of mathematics or science taken in the

freshman year to fulfill the requirements for the degree of Bachelor of Arts.

Third and Fourth Years

A large part or all of the work of these years may be taken in history, political science, political economy, and sociology. Students should advise with heads of departments or with the Director of the School of Political and Social Science concerning the order and grouping of their electives. Each student will be held responsible for making his elections in accordance with the requirements for the degree of Bachelor of Arts as stated above.

For course in Commerce see page 102.

SUGGESTED COURSE IN PREPARATION FOR THE STUDY OF LAW

First Year

First Semester	Second Semester
English,	2
Foreign language,	4 or 5
Greek and Roman history or Actual government and industrial history,	4
Mathematics or science,	4 or 5

Second Year

English,	3
Mathematics or science,	2 to 4
English history, political science, political economy, psychology, literature, additional language, or science,	9 to 11
	<hr/>
	14 to 16

Third Year

Logic and ethics,	2
Psychology, if not elected in the second year,	3
History, economics, politics, sociology, literature, language, science,	12 to 14
	<hr/>
	14 to 16

Fourth Year

Work in the College of Law as provided for in the combined Liberal Arts and Law Course.

SUGGESTED COURSES WITH MAJOR SUBJECTS

A. SUGGESTED COURSE WITH MAJOR IN POLITICAL SCIENCE

First Year

First Semester		Second Semester	hours
Political parties,	3	Contemp. state legislation,	3
Municipal government,	2	Colonial government,	2
Minor recommended:			
Money and banking,	3	Public finance,	3
Statistics,	2	Statistics,	2
or American history,		3	
Elective,		5 to 7	

Second Year

Jurisprudence,	3	Constitutional law,	3
Administrative law,	2	Administrative law,	2
Minor recommended:			
International law and political theory,	4		
Elective,		5 to 7	

B. SUGGESTED COURSE WITH MAJOR IN HISTORY

First Year

First Semester		Second Semester	
English history,	3	English history,	3
The renaissance and the reformation,	2	Historical research and criticism,	2
Minor recommended:			
Political parties,	3	Comp. state legislation,	3
Municipal government,	2	Colonial government,	2
or Economics,		3 to 5	
Elective,		5 to 7	

Second Year

American history,	3	American history,	3
Modern European history,	2	Modern European history,	2
Minor recommended:			
Political science, economics, or sociology		5 or 6	
Elective,		6 or 5	

C. SUGGESTED COURSE WITH MAJOR IN PRACTICAL SOCIOLOGY

First Year

Social amelioration,	3	Crime and Charities,	3
Anthropology,	2	Ethnology,	2
Minor recommended:			
Psychology,		3	
Logic and ethics,		2	
Elective,		5 or 6	

Second Year

Social philosophy and systematic sociology,	3
General economics and social legislation,	3
Minor recommended:	
Education 3, and Statistics 2	
Elective,	4 or 5

REQUIREMENTS FOR ADMISSION

The requirements for admission are the same as those of the College of Liberal Arts; see pages 87 ff.

COURSES OF STUDY

For description see pages 156 to 159, 179 to 189.

THE SUMMER SESSION

JUNE 17—JULY 27, 1907

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE E. MACLEAN,
PRESIDENT.

FREDERICK ELMER BOLTON, PH. D.
DIRECTOR; Professor and Head of the Department of Education.

CHARLES BUNDY WILSON, M. A.
Professor and Head of the Department of German Language and Literature.

LAENAS GIFFORD WELD, M. A.
Professor and Head of the Department of Mathematics, and Dean of the Graduate College.

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.
Professor and Head of the Department of Chemistry and Toxicology.

GILBERT LOGAN HOUSER, PH. D.
Professor of Animal Biology, and Director of the Zoological Laboratories.

BENJAMIN FRANKLIN SHAMBAUGH, PH. D.
Professor and Head of the Department of Political Science.

BOHUMIL SHIMEK, C. E., M. S.
Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium.

FRANKLIN HAZEN POTTER, M. A.
Professor of Latin.

CARL EMIL SEASHORE, PH. D.
Professor of Psychology, and Head of Department of Philosophy and Psychology.

KARL EUGEN GUTHE, PH. D.
Professor and Head of the Department of Physics.

FOREST CHESTER ENSIGN, M. A.
Professor in Education, and Inspector of High Schools.

EDWIN DILLER STARBUCK, PH. D.
Professor of Philosophy.

CHARLES HEALD WELLER, PH. D.

Professor of Greek and Archaeology, and Acting Head of the Department of Greek.

STEPHENS HAYES BUSH, A. M.

Acting Professor in Charge of Romance Languages.

PAUL SKEELS PEIRCE, PH. D.

Assistant Professor of History.

ROBERT BRADFORD WYLIE, PH. D.

Assistant Professor of Botany.

ERMINE C. CASE, PH. D.

Lecturer on Geology.

JOHN LEWIS GILLIN, PH. D.

Lecturer on Sociology.

WESLEY NEWTON CLIFFORD, B. S.

Lecturer on Education.

CALVIN NOYES KENDALL, M. A.

Lecturer on Education.

WILLIAM A. WILLIS, M. A.

Lecturer on Professional Reviews.

SAM BERKLEY SLOAN, B. A.

Instructor in English.

PERCIVAL HUNT, M. A.

Instructor in English.

HUGO WILHELM KOEHLER, B. A.

Instructor in German.

RICHARD PHILIP BAKER, B. SC.

Instructor in Mathematics.

FRED GEORGE BAENDER,

Superintendent of Engineering Shops.

HUGH STRAIGHT BUFFUM, PH. D.

Acting Instructor in Education.

LEE PAUL SIEG, M. S.

Instructor in Physics.

CLARENCE WYCLIFFE WASSAM, M. A.

Instructor in Education.

FRANK ORION SMITH, B. A.

Instructor in Professional Reviews.

FRANK HALL RANDALL, B. A.

Instructor in History.

LUCY MARY CAVANAGH, B. S.

Assistant in Botany.

ALEXANDER ROBBIE, B. A.

Assistant in Psychology.

ARTHUR LAWRIE TATUM, B. A.

Assistant in Chemistry.

OTTO FREDERICK KAMPMEIER,

Assistant in Animal Biology.

WILLIAM PETRIE CHRISTY,

Supervisor of Music.

AGNES ELIZABETH OTTO, B. A.

Supervisor of Drawing.

STAFF OF LIBRARY TRAINING SCHOOL

ALICE S. TYLER.

Director.

MALCOLM GLENN WYER, M. L., B. L. S.

Librarian; Resident Director.

HARRIET EMMA HOWE, B. L. S.

Cataloguer; Instructor in Cataloguing.

IRENE WARREN,

Instructor in Classification, etc.

EDNA LYMAN,

Instructor in Library Work with Children.

THE SUMMER SESSION COMMITTEE

Professor BOLTON, Chairman; Professor SHIMEK, Secretary;
Professors CALVIN, WELLER, WILCOX.

THE SUMMER SESSION

The Summer Session is an integral part of the regular university work, being the first term of the scholastic year. New students can enter at this time as well as at the beginning of either semester. The courses are so arranged as to supplement those offered during the rest of the year, and hence new or old students find no difficulty in classifying and securing work adapted to their needs. The experience of previous sessions has demonstrated the value of the work for the following classes of students:

1. *Superintendents and principals* who desire to continue academic and professional work and come in touch with recent advances in education.

2. *High school teachers* who wish to study special subject matter or educational theory.

3. *Elementary and grammar school teachers.* Unexcelled opportunities will be afforded to secure professional reviews in all the main branches taught in all grades of the public schools. (See topic PROFESSIONAL REVIEWS.) Many other courses especially those in literature, education, psychology, ethics, history, politics, nature study, physiology, and sociology, will be of exceeding value to the teachers below the high school as well as those in the high schools. Success in the elementary school depends as much upon breadth of culture as upon technique and primary methods.

4. *Candidates for state certificates* will find instruction in most of the subjects included in the state examinations.

5. *Regular students of the University* who desire to shorten the time of their course may do so by attending the Summer Sessions. Many students by this means are graduated in three years.

6. *Normal school graduates* and others desiring to take a degree ultimately will find it to their advantage to attend.

7. *Graduate students* will find ample opportunity in all departments to pursue work advantageously.

8. *Students* from three-year high schools and four-year high schools find opportunity to complete their preparation for college, especially in English, foreign languages, and mathematics.

9. *High school students* who expect to register in the fall. Not only the student who is in need of more thorough preparation but also the one completely equipped will find it highly advantageous to begin his work in the Summer Session. In this way he may become familiar with the University and its methods of instruction before the heavier work of the fall begins.

10. Persons who desire training in library work.

FACILITIES

All the resources of the University are placed at the disposal of the Summer Session students. All the laboratories and libraries in the departments of letters and science will be open, and every department will offer work of a grade equal to that given during the rest of the year. In most cases the heads of the departments will give instruction.

ADMISSION

No entrance examinations are required for admission to the summer session. Any person may be enrolled who is deemed able to profit by the work given.

Students should have maturity and training equivalent to that represented by the completion of a high school course. Many teachers who have not taken such a course, but who have had considerable experience in teaching and who have maturity of mind may profit by many of the courses offered.

PREPARATION OF HIGH SCHOOL TEACHERS

One of the special functions of the State University is to prepare high school teachers. For the accomplishment of this important work it has a large corps of specialists, large labo-

ratories and libraries, and excellent facilities for the study of psychology and the science of education. Large numbers of high school teachers are in attendance upon every Summer Session.

TEACHERS' POSITIONS

The university maintains a bureau for the purpose of assisting its properly prepared students to secure desirable positions. The head of the department of education is chairman of the committee on recommendations. During the past season the University has placed more than a hundred of its graduates in the best high schools and in superintendencies. During the past fall nearly as many more might have been placed had they been available. The Summer Session is a good time for teachers who desire to change positions to meet superintendents. Many of the best superintendents are in regular attendance, and many others come for a few days to find teachers.

STATE CERTIFICATE SUBJECTS

A special feature will be made of subjects preparatory to examination for state certificates. The following subjects will be found directly helpful: Algebra, Botany, Child Study, Civics, Commercial Geography, Drawing, English Language, English Literature, Geometry, History of Education, Public School Music, Physics, Physical Geography, Political Economy, Principles of Education, Psychology, United States History.

COUNTY CERTIFICATE SUBJECTS

The University offers this year for the first time special courses designed to be of definite assistance to those who are preparing for county certificate examinations. This work is in the nature of professional reviews in all of the most important subjects required.

UNIVERSITY CREDIT

1. Credit will be given for all university work satisfac-

torily completed when the student has complied with the regular entrance requirements as stated in the annual announcements.

2. Credit will be given on the same basis as for the regular work of the year. That is, for the satisfactory completion of a course of five hours a week during the Summer Session there will be awarded one and two thirds semester hours of credit; for a course of three hours a week, one hour credit, etc.

PROJECTED REGISTRATION

By special permission of the faculty experienced teachers who have been in regular attendance during the Summer Session, and who are regularly matriculated in the University, may continue their work at home during the year. By this means they may reduce the residence requirements for graduation. Several superintendents and teachers are now carrying on work advantageously by this plan.

GENERAL LECTURES AND ROUND TABLE MEETINGS

Every summer a series of public lectures, many of them illustrated, has been provided without expense to the students of the Summer Session. Arrangements are under way to offer an especially attractive programme by members of the faculty, eminent superintendents, and others. A definite programme of the lectures to be given will be announced at the opening of the session.

The general assembly will be held every Wednesday at 9:45 A. M. in the auditorium of the Hall of Liberal Arts.

Round table meetings for the discussion of various topics of interest to educators will be organized by those in attendance upon the session, as circumstances may suggest.

SPECIAL COURSES

ENGLISH—In view of the increased interest in better English teaching in the public schools, and in the hope of helping Iowa schools to continue in the lead in this advanced movement, an effort has been made to provide courses that will be

especially helpful to teachers of English in the high school and in the grades. Work in literature, of special value to teachers and librarians, and also a thorough course in composition, will be offered.

PHYSIOGRAPHY—The teachers' course in geographic geology proved so popular and helpful last year that it is offered again this year. It is designed to be of special value to teachers of physical geography in the high school. It will have distinct value for every grade teacher as well.

EDUCATION (a)—THE HIGH SCHOOL—Problems of the high school are everywhere attracting attention and there is necessity for their careful consideration. The period of life covered by the high school is one of the greatest concern in the whole life of the individual and therefore demands the wisest possible guidance. The interest in the course on the high school last year more than warrants its repetition.

SCHOOL SUPERVISION (b)—Superintendent W. N. Clifford of Council Bluffs, who has gained such an enviable reputation for his work in objective geography, will also give five lectures on school supervision and five on geographical work in the schools. This last work will be illustrated by objective material and with stereopticon views.

Superintendent Calvin N. Kendall of Indianapolis, Indiana, will give five lectures on problems of school supervision and five on methods of teaching. Superintendent Kendall has achieved a national reputation through his work as Superintendent in New Haven, Connecticut, and Indianapolis, Indiana. (First week, June 17-21).

METHODS OF INSTRUCTION (c)—This work has not been offered at any previous session. In this course, which will be in charge of Dr. BUFFUM, Superintendent CLIFFORD and Superintendent KENDALL will each give a week to methods in special subjects. (Superintendent KENDALL, June 17-21; Superintendent CLIFFORD, July 22-26.)

PROFESSIONAL REVIEWS—Professional reviews are provided for teachers in the various grades of public school work.

THE PUBLIC SCHOOL LIBRARY is coming to occupy a very important place in connection with all forms of public school work. Many teachers have felt the need of training in library methods, especially adapted to school work. To supply this

need Miss WARREN, who has charge of the model school library in connection with the elementary and high schools of the University of Chicago, has been secured to give instruction.

MANUAL TRAINING—This was offered for the first time in 1906. It will include mechanical drawing, woodwork and turning, pattern making, forging, etc. This subject is becoming recognized as an important branch in all our public schools and it is the design of the University to offer a thoroughly practical course to teachers of Iowa.

STATE EXAMINATIONS

In the special interest of those students who may wish to secure state certificates or state diplomas, the State Board of Educational Examiners will hold an examination at the University on July 25, 26, 1907.

EXPENSES

The tuition fee for the summer session is five dollars, which covers all dues to the University. Tuition is free in the graduate college.

There are no dormitories and no commons connected with the University. Clubs may be formed, in which the cost of day board is from \$2.00 to \$2.50 per week. Room rent varies from 50 cents to \$1.50 per week for each student. Boarding and lodging in private houses can be obtained for from \$3.50 to \$5.00 per week.

Inquiries regarding rooms and board may be made of the Director upon arrival at the University.

REGISTRATION

1. New students should see, first, the Director of the Summer Session, room 217 Hall of Liberal Arts; second, the Treasurer in the Old Capitol; third, the Registrar in the Old Capitol.

2. Students who have been registered in the University at any previous time, either during a Summer Session or during a regular semester should go, first, to the Treasurer, and,

Graduate College go at once to the Registrar.

Office hours of the President of the University, 11 A. M. to 12:15 P. M.

Office hours of the Director of the Summer Session, 11 to 12 M. and 2:00 to 2:30 P. M. daily.

Any further information desired may be obtained by addressing President George E. MacLean, or Professor Frederick E. Bolton, Director of the Summer Session, Iowa City, Iowa.

COURSES OF INSTRUCTION

The courses afforded in the several departments represented in the Summer Session are outlined here. Persons who desire more detailed information should communicate directly with the professors concerned.

BOTANY

PROFESSOR SHIMEK; ASSISTANT PROFESSOR WYLIE, MISS
CAVANAGH

I. TEACHERS' COURSE IN PLANT ECOLOGY. 5 hrs

Intended primarily for teachers of botany in Iowa high schools. The course consists of laboratory and field investigation of the local flora, with special reference to the conditions which determine the distribution of plants, especially in Iowa. It is essentially a study of the "botany of out-of-doors," and is intended to familiarize the teacher with illustrative material available for class use.

Directions and opportunities are also given for the preservation of such illustrative materials for high school use. Professor SHIMEK.

Daily, at 11:00.

II. COMPARATIVE MORPHOLOGY OF PLANTS. 5 hrs.

This course consists of lectures and laboratory study on the structure and life-history of types of the principal groups of plants. Typical algæ, fungi, mosses, ferns, and flowering plants are discussed in the laboratory. Some attention is given also to field work. Two hours daily are required. Assistant Professor WYLIE.

Daily, 8:00-10:00.

III. FIELD BOTANY. 2 or more hrs.

A study of the local flora with special reference to the identification of plants of the principal groups. Special emphasis is laid on the recognition of fern and seed plants. The

work requires frequent field excursions for the collection of material. Professor SHIMEK.

IV. METHODS IN PLANT HISTOLOGY.

Instruction in the preparation of permanent microscopic slides. Methods of killing, embedding, sectioning, staining, and mounting, plant-tissues. Methods for the different groups of plants are discussed, and the student may prepare an extensive series of slides for laboratory use in high school or college. Daily exercises of at least one hour. The student may devote more time to the work if he desires. For the proper prosecution of this work at least two consecutive hours should be at the disposal of the student. Assistant Professor WYLIE.

Daily, 10:00-12:00.

V. SPECIAL COURSES.

A limited number of special courses in advanced botanical research may be provided for those who are prepared for such work. Time arranged to suit applicants.

The extensive collections in the University herbarium, and the botanical reference library, will be at the disposal of registered students. Professor SHIMEK; Assistant Professor WYLIE.

VI. NATURE STUDY.

4 hrs.

A course in nature study (without credit) is offered for persons who expect to teach in the grades. Professor SHIMEK.

Monday, Tuesday, Wednesday, and Thursday, at 9:00 (with an additional hour for field work).

CHEMISTRY

PROFESSOR ROCKWOOD; MR. TATUM

I. DESCRIPTIVE INORGANIC CHEMISTRY.

5 hrs.

This is an elementary course of lectures planned for those who wish to give instruction on the subject in secondary schools. It will deal principally with the non-metallic elements, although the metals will also be considered. The fundamental principles of chemistry and the properties of the elements and their important compounds will be demonstrated experimentally.

Daily, at 8:00.

II. CHEMICAL PRACTICUM. 3 to 5 hrs.

Opportunity will be given to perform in the laboratory experiments illustrative of the principles of inorganic chemistry. The more common chemical manipulations will be learned and also the methods of setting up apparatus. The work can be taken with the preceding course or by those who have had its equivalent.

III. QUALITATIVE ANALYSIS. 3 to 5 hrs.

Such a knowledge of general chemistry as may be gained in one year of a high school course is a prerequisite. The work is for the most part done in the laboratory although lectures, demonstrations and recitations will be included.

IV. VOLUMETRIC ANALYSIS. 3 to 5 hrs.

This course serves as an introduction to more difficult methods of quantitative analysis. It is mainly laboratory work; lectures will be given as are necessary. After an elucidation of the general principles the preparation of standard solutions, sources of error and practical applications will be illustrated. The same preparation is necessary as for course II.

V. CHEMICAL RESEARCH.

For this a knowledge of inorganic and organic chemistry including qualitative and quantitative analysis, is essential also a reading knowledge of French and German. Subjects will be assigned to meet individual requirements. Twenty to thirty hours weekly.

EDUCATION

**PROFESSOR BOLTON; PROFESSOR ENSIGN, DR. BUFFUM, SUPER-
INTENDENT KENDALL, SUPERINTENDENT CLIFFORD**

I. PRINCIPLES OF EDUCATION. 5 hrs.

A series of lectures upon selected topics on the principles of education. The following subjects will constitute the major part of the course: the educational bearings of memory, imagination, apperception, and induction; thought and language development; the doctrine of interest; will, conduct, and

character. This course has not been given in any previous summer session. Professor BOLTON.

Daily, at 3:30.

II. THE HIGH SCHOOL AND SCHOOL SUPERVISION. 5 hrs.

A composite course consisting of a series of lectures by Professor BOLTON (2 weeks), Professor ENSIGN (2 weeks), Superintendent KENDALL (first week), and Superintendent CLIFFORD (last week). A course of reading will accompany the lectures. A careful consideration will be given to some of the most fundamental problems relating to the high school and its adolescent pupils, and to problems of school organization and supervision.

Daily, at 2:30.

III. CHILDHOOD AND ADOLESCENCE. 5 hrs.

The scope, methods, and literature of child study; its relation to education and its value and necessity for parents and teachers. Emphasis will be placed upon the determination of the periods in the growth of children, and the kind of training best adapted to each period. Such topics as imitation, children's play, fancy, the beginnings of child-language, elementary ideas of law and order, beginnings of moral and religious notions, fears, adolescence, etc., will be considered. Lectures and readings. Professor STARBUCK.

Daily, at 4:30.

IV. HISTORY OF EDUCATION AND SCHOOL LAW. 5 hrs.

This course will be designed especially to meet the needs of those who are preparing for state certificates. The major portion of the time will be devoted to the history of education. The topics will be those emphasized in the state certificate examinations. Dr. BUFFUM.

Daily, at 10:00.

V. METHODS OF INSTRUCTION. 5 hrs.

A brief consideration of the fundamental principles of general method, followed by an exposition of methods in several special subjects. Selection will be made according to the wishes of the class from among the following subjects: arithmetic, algebra, English, geography, history. Dr. BUFFUM will have charge of the class and give the work in general method. Superintendent CLIFFORD will give five lectures on objective

work in geography (last week). This will be illustrated with exhibitions of materials and stereopticon views. Superintendent KENDALL will give five lectures upon special methods (first week). Professor ENSIGN will give ten lectures on special methods.

Daily, at 1:30.

VI. SEMINARY IN EDUCATION.

5 hrs.

Designed to assist graduate and other advanced students in research and investigation. A part of the time will be devoted to the consideration of technical educational literature and modern educational problems. It is possible that Hall's *Adolescence* may be read and discussed. Professor BOLTON.

Daily, at 11:00 (subject to change).

VII. THESIS WORK.

Advanced students preparing theses or conducting original investigations will receive personal direction. Special opportunities will be afforded for this work. Professor BOLTON.

VIII. COURSE FOR TEACHER-LIBRARIANS.

3 hrs.

A course of lectures and demonstrations on matters relating to the use and care of the school library as an accessory in effective teaching. For a fuller description of the course see p. 51. Miss WARREN.

Monday, Wednesday, and Friday, at 1:30.

ENGLISH

MR. SLOAN; MR. HUNT

I. CHAUCER.

5 hrs.

An introduction to Chaucer's English, a survey of his literary work, and a study of typical poems. Mr. HUNT.

Daily, at 8:00.

II. SHAKESPEARE.

5 hrs.

A study of three comedies of Shakespeare, with the reading of other Elizabethan comedies. Mr. HUNT.

Daily, at 9:00.

III. ARGUMENTATION.

5 hrs.

A course in argumentative composition, based on Baker's *Principles of Argumentation*. Mr. SLOAN.

Daily, at 10:00.

IV. THE TEACHING OF ENGLISH.

5 hrs.

A study of some of the classics prescribed in the "uniform college entrance requirements" in English for 1907-1908. Mr. SLOAN.

Daily, at 11:00.

FRENCH

ACTING PROFESSOR BUSH

I. ELEMENTARY FRENCH.

5 hrs.

Designed for teachers and students who wish to learn to read French sufficiently well to enable them to continue the study themselves for the purpose of research in other branches and for general culture. Training in pronunciation. Study of grammar for reading purposes only. Edgren's *Short French Grammar* and *Quatre Contes de Mérimée*.

Daily, at 10:00.

II. READING COURSE.

5 hrs.

Open to students who have had one semester at least of French. The class will read one play, *Le Voyage de M. Perichon*, and a number of short stories. Opportunities for expression in French will be given.

Daily, at 1:30.

III. CONVERSATION AND PRONUNCIATION.

3 hrs.

This course aims to give such facility in speaking and understanding the language as the time and proficiency of the students electing it will permit. The method employed will depend largely upon the latter. Open to students who have had one semester of French.

Monday, Wednesday, and Friday, at 8:00.

IV. FRENCH LITERATURE.

2 hrs.

A series of lectures on such men as Rabelais, Montaigne, Molière, Voltaire, Rousseau, Victor Hugo, and a few others. No knowledge of French is required. Outside reading in English. The object of the course is to acquaint students who have not had an opportunity to study French with some of the greatest names of French literature.

Tuesday and Thursday, at 8:00.

GEOLOGY

PROFESSOR CASE

I. GEOGRAPHIC GEOLOGY. 5 hrs.

This is a course intended to meet the needs of those who expect to teach physical geography and geology in high schools. It will include a study of the origin of the physical features of the earth, the agencies of geographical development and change, and an outline of historical geology. Large use will be made of illustrative materials, including rocks and mineral specimens, models, maps, photographs and lantern slides. Field excursions on Saturdays are included in the course.

Daily, at 10:00

II. EVOLUTION OF THE NORTH AMERICAN CONTINENT. 5 hrs.

This course is offered for students who have had some training in the elements of geology. The object of the course will be to trace the development of the continent from the earliest known time to the present, and to emphasize the more prominent and better known stages in the development. Stress will be placed on the historical rather than the structural features involved. The work will be carried on by means of lectures, assigned reading, and consultations.

Daily, at 8:00.

III. RESEARCH WORK.

An opportunity will be given to advanced students for research and investigation. Personal conferences will be arranged to suit individual needs.

GERMAN

PROFESSOR WILSON; MR. KOEHLER

I. GERMAN STORY. 5 hrs.

Reading of Mueller's *Deutsche Liebe*. This course has not been offered before, and it may therefore be taken without duplication. Applicants for the course should have studied German at least one year. Johnston's edition of Mueller's *Deutsche Liebe* (Ginn). Professor WILSON.

Daily, at 8:00.

II. GERMAN POEMS.

5 hrs.

An attempt will be made to show the beauties of Schiller's poems, the refining influence of his personality as expressed in his poetical work, and its inspiring message for the present time. This is a new course, and it may therefore be taken without duplication. Professor WILSON.

Daily, at 9:00.

III. GERMAN LIFE.

3 hrs.

A course of lectures in German on German life, institutions, and customs. There are occasional discussions of the topics treated in the lectures. The course thus affords incidentally an opportunity for practice in conversation. The lectures are popular rather than scientific. This course may be taken to advantage in connection with course IV. Mr. KOEHLER.

Monday, Wednesday, and Friday, at 10:00.

IV. GERMAN COMPOSITION.

2 hrs.

Designed to give practice in composition and niceties of idiom and special drill in pronunciation. Conducted in German and English. This course may be taken to advantage in connection with course III. Mr. KOEHLER.

Tuesday and Thursday, at 10:00.

V. ELEMENTARY GERMAN.

5 hrs.

Designed for beginners and students who wish to review elementary German. Bierwirth's *Beginning German* (Holt). Mr. KOEHLER.

Daily, at 9:00.

GREEK AND ARCHÆOLOGY

PROFESSOR WELLER

I. ELEMENTARY GREEK.

5 hrs.

This course is intended to give, with a minimum of paradigms and syntax, some reading knowledge of easy Greek prose. Text-books: Goodell's *Grammar of Attic Greek* and Moss' *First Greek Reader*. The course may be taken to secure University or preparatory credit. It is especially recommended to teachers and students of Latin.

Daily, at 9:00.

II. LUCIAN. 5 hrs.

Reading of selections from Lucian, *The Dream*, *Charon*, *True History*, etc., with a survey of the life and times of the author.

Daily, at 10:00.

III. XENOPHON. 5 hrs.

An advanced course in Xenophon's *Anabasis* especially for teachers of Greek. Topics such as Xenophon's life, writings, style, and diction, the authorship, composition, and manuscripts of the *Anabasis*, parallel accounts of the expedition, the route of "The Ten Thousand," and Greek military tactics will be discussed in lectures, with required reading. A small portion of the text will be read critically.

Daily, at 10:00.

Probably but one of the last two courses will be given in the summer of 1907, the choice depending upon the demand of students.

IV. GREEK ART AND ARCHAEOLOGY. 1 hr.

A brief survey of the field of Greek Art and Archæology, given in a series of illustrated lectures, as follows:

1. The "Mycenæan" Age.
2. Beginnings of Greek Sculpture.
3. The Masters of Greek Sculpture.
4. Principles of Greek Architecture.
5. The most important Greek buildings.
6. The minor arts,—vase painting, terra-cottas, gems, coins, etc.

This course does not require a knowledge of Greek and is open to all members of the University. With study of assigned reading, it may be taken for University credit.

Tuesday, at 7:15 P. M.

HISTORY

ASSISTANT PROFESSOR PERCE

I. THE FORMATION OF THE UNION. 5 hrs.

A study of the period of the making of the American union—the achieving of independence, the securing of the federal constitution, the inauguration of the new government,

early national problems, and the formation of policies and parties. Lectures and assignments.

Daily, at 7:00.

II. THE ERA OF RECONSTRUCTION. 5 hrs.

A survey of the conditions and problems growing out of the civil war, and a study of the men, measures, and lessons of reconstruction days. Lectures and assignments.

Daily, at 9:00.

III. GRADUATE WORK.

Opportunity will be given for graduate students to pursue some special line of investigation in American history under direction of the instructor in charge.

LATIN

PROFESSOR POTTER; PROFESSOR WELLER

I. SALLUST. 5 hrs.

Sallust's *On the Conspiracy of Catiline* will be read. This course is supplementary to the course in Cicero's *Orations against Catiline*. Open to students who have had two or more years of Latin, and may be substituted for part of the requirements in Caesar or Cicero. Professor WELLER.

Daily, at 11:00.

II. OVID. 5 hrs.

General survey of Ovid's life and times. Reading of selections from the *Fasti*, *Heroides*, *Amores*, *Metamorphoses*, and *Tristia*. Open to freshmen. Students deficient in part of Vergil may take this as a substitute. Professor POTTER.

Daily, at 7:00.

III. TEACHERS' COURSE. 5 hrs.

a. Lectures on the teaching of Latin. The following topics will suggest the scope of these lectures: aims of the study of Latin; the best age to begin the study; the student who fails; presentation of vocabulary, paradigms, and syntax; material for translation; the use of sight-reading; difficulties of the second year; points to emphasize in the first and second years; writing Latin; pronunciation; reading of verse. Monday, Wednesday, and Friday.

b. Roman antiquities. Tuesday and Thursday. Professor POTTER.

Daily, at 8:00.

IV. GRADUATE COURSES.

More advanced courses will be provided for graduate students. Persons who are interested in such work are invited to correspond with Professor Potter, in order that suitable arrangements may be made.

MANUAL TRAINING

MR. BAENDER

I. MECHANICAL DRAWING. 5 hrs.

A course especially designed for those taking shopwork. The course includes instruction in the use of tools, lettering, drawing from objects, original designs, development of surfaces, tracing and blue-printing. Drawings will be made of the various machine parts in the shops, special attention being given to the conventional methods of representing mechanical objects.

Daily, 8:00 to 10:00.

II. WOODWORK AND TURNING. 5 hrs.

A course especially arranged for teachers of woodwork. Instruction will be given in the use of the various hand tools and especial attention will be given to the design of finished products, embracing a selection of material, methods of joining, staining and finishing. The course in turning includes all the various methods of lathe work, the student being required to design and turn various objects embracing the different operations in turning.

Daily, 10:00 to 12:00.

III. PATTERN MAKING. 5 hrs.

A course intended only for those who have had Course II, or its equivalent. This course includes a study of the theory of patterns and making of various patterns illustrating the principles involved. This course will be supplemented with lectures on modern foundry practice.

Daily, 10:00 to 12:00.

IV. FORGING.**5 hrs.**

A course designed to meet the needs of teachers of forging, also well adapted for blacksmith apprentices wishing to become better acquainted with the methods of forging. This course includes forging of iron and steel, welding, hardening, tempering, and annealing. Special attention will be given to forging from specifications, choice of material and working out finished product. A study will be made of the various methods of iron and steel manufacture, special stress being laid on the selection of steel to meet the requirements of various tools, with special methods of tempering them.

Daily, 1:30 to 4:30.

V. MACHINE SHOP.**5 hrs.**

A course arranged to meet the needs of teachers of shop practice—use of hammer and chisel, filing and scraping, lathe work, planer and shaper, milling and grinding. Instruction in the use of the micrometer screw for accurate measurements, cutting and grinding tapers to fit, valve grinding, tool grinding, cutting single and double square threads. A study will be made of the theory of gear teeth and the whole supplemented with general machine shop practice.

Daily, 1:30 to 4:30.

MATHEMATICS AND ASTRONOMY

PROFESSOR WELD; MR. BAKER, MR. —

The following courses in mathematics will be given with special reference to the needs of high school teachers. University credit may be given for courses IV, V, VI, and VIII, and under certain circumstances, course II. Courses I, III, and IV are arranged with reference to the needs of teachers preparing to take examinations for state certificates or diplomas, and of students seeking admission to the University.

The instructors will give liberally of their time and service to those wishing direction in any of the lines of study coming within the scope of the department. Special appointments will be made with individuals.

I. ALGEBRA.**5 hrs.**

An elementary course designed primarily for those pre-

paring to take examinations for state diplomas or for admission to the University. Mr. ———.

Daily, at 8:00.

II. ADVANCED ALGEBRA. 3 hrs.

This will be essentially a teachers' course, both the subject matter and methods of presentation being given careful attention. The theories of the minus sign and of the exponent will be considered at the outset. The simple equation of the first degree will next be studied and geometrically interpreted, after which the quadratic equation and equations of higher degrees will be treated in a similar manner. Attention will also be given to systems of simultaneous equations. The course will include a study of imaginary expressions, and their interpretation. Professor WELD.

Monday, Wednesday, and Friday, at 9:00.

III. PLANE GEOMETRY. 5 hrs.

The so-called *heuristic*, laboratory, and other methods of teaching geometry will be discussed and illustrated. At the same time the work will be so conducted as to enable the student to obtain a comprehensive view of the subject. This is not a beginner's course, but the subject will be reviewed with special reference to the needs of those intending to take the examinations for state diplomas or for admission to the University. Mr. ———.

Daily, at 10:00.

IV. SOLID GEOMETRY. 5 hrs.

One preparatory credit will be given upon the completion of this course; or, if the entrance requirements have been otherwise met, two semester hours of University credit will be allowed. The student to whom the subject is new will need to devote extra time to the work, if it is to be completed successfully. Mr. BAKER.

Daily, at 11:00.

V. TRIGONOMETRY. 5 hrs.

This course will be limited to plane trigonometry, and can be taken only by those having a good knowledge of geometry and algebra. The subject will be studied with special reference to its practical applications to surveying, navigation, mensuration, etc. Credit, one semester hour. Mr. BAKER.

Daily, at 10:00.

VI. HIGHER MATHEMATICS.

Courses in higher mathematics will be arranged, with only reasonable limitations, to meet the requirements of all who may present themselves for such work. Correspondence with reference to the specific lines of work desired is invited. The credit allowed will depend upon the amount and quality of work done. Professor WELD; Mr. BAKER.

Monday, Wednesday, and Friday, at 9:00 and 10:00; Tuesday and Thursday, at 11:00.

VII. THE HISTORY AND TEACHING OF MATHEMATICS. 2 hrs.

The course will be conducted by the seminary method, much use being made of the abundant material in the mathematical library. Professor WELD.

Tuesday and Thursday, at 8:00.

VIII. ASTRONOMY.**2 hrs.**

If desired by a sufficient number a brief course in practical astronomy will be given. The instruments at the observatory will be used for the determination of time, latitude and longitude. Many of the more interesting celestial objects will be located and studied with the aid of the telescope. The subject will be further illustrated by the exhibition of the series of lantern slides belonging to the department. Those properly prepared to undertake the work will receive credit upon the usual terms. Professor WELD.

Tuesday and Thursday, at 7:30 P. M.

PHILOSOPHY AND PSYCHOLOGY

PROFESSOR SEASHORE; PROFESSOR STARBUCK, MR. ROBBIE

I. INTRODUCTION TO PSYCHOLOGY.**5 hrs.**

A brief survey of the entire field of psychology, especially adapted for teachers who can take only a short course. The lectures will be accompanied by demonstrations with apparatus and other illustrative material from the psychological laboratory, and by supplementary reading. The course serves as an introduction to all other courses in the department of philosophy. Professor SEASHORE.

Daily, at 8:00.

II. INTRODUCTION TO PHILOSOPHY. 5 hrs.

An elementary study of fundamental philosophical questions with some reference to historical relations. Designed for students who wish to make a brief study of the great problems of philosophy and their significance in other fields of thought. Paulsen's *Introduction to Philosophy* will be used as a basis. Lectures, required reading, and recitations. Professor STARBUCK.

III. LABORATORY COURSE IN PSYCHOLOGY. 5 hrs.

A series of selected experiments so arranged as to familiarize the students with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological studies and especially to furnish training in accurate observation and interpretation of mental processes. May be taken with or in sequence to course I. Three laboratory periods and two lectures a week. Professor SEASHORE.

Laboratory; Monday, Wednesday, and Friday, 1:30 to 3:30.

Lectures; Tuesday and Thursday, at 1:30.

IV. RESEARCH IN PSYCHOLOGY.

Original investigation of special problems in psychology. Advanced individual work in the laboratory for graduate students. In this course special attention may be given to preparation for the experimental study of school children. Professor SEASHORE.

**V. PUBLIC LECTURES ON THE PSYCHOLOGY OF HEARING.
(Experimental.)**

1. Hearing the direction of sound.
2. Hearing tones.
3. Hearing and musical training.
4. Hearing-ability and rhythm.
5. Hearing and singing.

Professor SEASHORE.

Saturday, at 8:00.

VI. PUBLIC LECTURES ON THE INTERPRETATION OF RELIGION.

These five lectures are intended to throw light upon the nature of the religious impulse and its function in race development. The subjects of the lectures are:

1. Religion as an instinct.

2. Some instincts which are contributory to religion.
3. The utility of religion as a factor in social evolution.
4. Theology and religion.
5. Religion as a revealer of truth.

Professor STARBUCK.

Saturday, at 9:00.

PHYSICS

PROFESSOR GUTHE; MR. SIEG

I. GENERAL COURSE. 10 hra

This is an elementary course of lectures covering the whole field and well adapted for a general review of the subject.

Double course. Lectures daily, at 8:00 and 11:00.

II. RECENT PROGRESS IN ELECTRICITY. 2 hra

This is a lecture course dealing with the following subjects: Cathode rays, X-rays, Ions, Electrons, Radioactivity, Electric Waves, and Wireless Telegraphy. A knowledge of general physics is required.

Tuesday and Thursday, at 9:00.

III. LABORATORY WORK.

The work in the laboratory being entirely individual, students of various degrees of advancement can be accommodated at the same time. It is required, for admission to this course, that the candidate should have had at least a good elementary preparation in physics. Students who have had work equivalent to the first year's course in physics in the University, may obtain credit for laboratory work pursued for not less than six hours a week during the session. For teachers the work can be arranged to meet individual needs, such as gaining familiarity with particular pieces of apparatus, or carrying out special lines of experimentation.

IV. GRADUATE WORK.

The laboratory and the departmental library will be open to graduate students under the usual conditions. Selected subjects, either of a theoretical or an experimental nature, will be assigned for critical study. A reading knowledge of French and German is desired.

Note: If a sufficient number of teachers should be interested, weekly meetings will be held for the discussion of problems met in the teaching of High School Physics.

POLITICAL ECONOMY AND SOCIOLOGY

DR. GILLIN; MR. WASSAM

I. ELEMENTARY ECONOMICS. 5 hrs.

Designed as an introduction to the leading principles of economic science. Mr. WASSAM.

II. COMMERCIAL GEOGRAPHY. 5 hrs.

This course is designed for teachers and is given with illustrative material from the commercial museum. Mr. WASSAM.

Daily, at 10:00.

III. INTRODUCTION TO SOCIOLOGY. 5 hrs.

The relation of sociology to the other social sciences; the physical and psychical aspects of association, social forces, social genesis; social values and social welfare. Dr. GILLIN.

Daily, at 11:00.

IV. APPLIED SOCIOLOGY.

Studies in practical philanthropy. Dr. GILLIN. .

Daily, at 1:30.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH

I. IOWA HISTORY AND POLITICS. 5 hrs.

Lectures on the political and constitutional history of Iowa. An attempt will be made to make this course especially helpful to those who are interested in the teaching of civics in the public schools. Some attention will be given to the methods of teaching civics.

Daily at 7:00.

II. MODERN EUROPEAN GOVERNMENTS. 5 hrs.

A comparative study of the leading governments of modern Europe including the Government of England, the Government of Switzerland, the Government of France, the Government of Germany, and the Government of Belgium.

Daily, at 9:00.

SANSKRIT

PROFESSOR POTTER

I. ELEMENTARY SANSKRIT. 5 hrs.

Grammar with the reading of easy selections from the *Nala*. Lectures on the relation of Sanskrit to the other Indo-European languages. Students expecting to take this course should provide themselves with Whitney's *Sanskrit Grammar* and Lanman's *Sanskrit Reader*.

Daily, at 10:00.

ZOOLOGY: ANIMAL BIOLOGY

PROFESSOR HOUSER; MR. KAMPMEIER

I. PHYSIOLOGICAL BIOLOGY. 5 hrs.

Lectures, laboratory studies, and supplementary demonstrations. This course presents a general view of the principles of animal physiology as a branch of biological science; it is planned with reference to the needs of the teacher of physiology in the high school.

Daily, at 1:30.

II. PRINCIPLES OF BIOLOGY. 5 hrs.

Lectures giving a comprehensive survey of the aims, the chief problems, and the more important results of biological science, presented from the standpoint of animals. The course is intended for those desiring to make a rapid survey of the entire field, either as an introduction to advanced study, or as part of a liberal education.

Daily, at 10:00.

III. APPLIED BIOLOGY. 5 hrs.

An advanced course of lectures and demonstrations. The subjects considered include: foods—their chemical composition, changes induced by cooking, means of preservation, common adulterants; modern dietary and nutrition studies; micro-organisms of disease,—their general biology, their dissemination by means of air, water, food-products, animal agents; disinfection; animal parasites; conditions affecting health in the home and school; muscular exercise, the nervous system,

sleep, and other factors of student-life. The work is broadly biological in scope, and is of especial value as an introduction to the problems of teaching, medicine, and sanitation.

Daily, at 9:00.

PROFESSIONAL REVIEWS AND TEACHERS' COURSES

Professional reviews are offered in the subjects mentioned below. These reviews will be of value to all who expect to take examinations for teachers' certificates. They will also be useful to teachers of rural and graded schools and to high school graduates as preparation for examinations or for teaching in rural schools or in the grades. Besides the thorough academic reviews afforded, much valuable help will be gained from the instructors in methods of teaching the subjects. The subjects and instructors are given below. Each course is of five hours a week.

English Grammar and Composition.

A review of the essential facts of grammar, application of the laws governing the correct usage of parts of speech and the choice of words and expressions. Besides this, attention will be given to methods of teaching grammar, the use of the text-book, plans for composition, etc. Principal WILLIS.

Civil Government.

A review of the most important features of both the United States Constitution and the Constitution of Iowa, together with due consideration of methods of teaching them in rural and graded schools. Principal WILLIS.

Book-keeping.

Those fundamentals will be considered which will assist the student to pass the state examination. Principal WILLIS.

Arithmetic.

The aim will be to select the most important and the most troublesome portions of arithmetic, to extend the student's grasp of the subject, to systematize his knowledge, and to aid him in gaining correct methods of presenting the subject to pupils. Mr. SMITH.

Geography.

Attention will be devoted to both political and physical

geography. Such topics will be selected as will put the student in possession of typical facts and plans of study. Methods of teaching, selection of supplementary reading, available materials, etc., will be duly considered. Mr. SMITH.

Physiology.

The course will aim to teach the various life-processes and their interdependence. Such topics as circulation, respiration, digestion, foods, muscles, the sense organs, the nervous system, etc., will be considered. Especial emphasis will be placed upon hygiene of the home, the school, the person, and upon methods of making physiology interesting and valuable to pupils. Mr. SMITH.

Public School Music.

A course in public school music will be given which will enable the student to pass the county or state examinations in music. It will also be helpful in illustrating how to teach the subject in schools. Mr. CHRISTY.

Public School Drawing.

Designed to meet the needs of those who are preparing for the state examination. It will be helpful in methods of teaching the subject in public schools. Miss OTTO.

United States History.

A review of some of the leading topics in United States history, such as, exploration, colonization, important wars, constitution-building, reconstruction, growth of institutions, etc. Attention will be given to methods of teaching, choice of texts, selection of materials, supplementary reading, etc. Mr. RANDALL.

Algebra.

This will be a teachers' review-course, attention being paid to points which usually give students difficulty. Especial emphasis will be made on those parts which are covered in the requirements for teachers' certificates. Mr. ———.

Nature Study.

This subject, though not required in the examinations, is of such value to teachers in rural and graded schools that it is included in this group. Professor SHIMEK.

THE SUMMER SCHOOL

FOR LIBRARY TRAINING

A DEPARTMENT OF THE SUMMER SESSION, UNDER THE AUSPICES
OF THE
IOWA LIBRARY COMMISSION

MEMBERS OF THE COMMISSION *Ex-officio*

JOHNSON BRIGHAM, *State Librarian,*
President.

JOHN F. RIGGS, *State Superintendent of Public Instruction.*

GEORGE E. MACLEAN, *President of the State University of Iowa.*

MEMBERS OF THE COMMISSION BY APPOINTMENT

MRS. HORACE M. TOWNER, Corning.

MRS. DAVID W. NORRIS, Grinnell.

MRS. HENRY J. HOWE, Marshalltown.

CAPTAIN W. H. JOHNSTON, Ft. Dodge.

ALICE S. TYLER,
Secretary of the Commission.

The Iowa Library Commission announces the seventh annual session of the Summer School for Library Training, to be held at the State University of Iowa, Iowa City, as a department of the Summer Session of the University, June 17 to July 27, 1907.

OBJECT

This course is intended primarily to meet the needs of the smaller public libraries of Iowa. Librarians already hold-

ing positions in the state, assistants in the larger libraries, and those definitely appointed to library positions who wish to prepare for their work, are given the preference in making up the class. The course is not offered as a substitute for the full training of one of the regular library schools, but is given for those who feel their lack of knowledge of modern library methods and have not the time or the means to attend a full-course school. This brief, systematic course will give a broader view of the work as a whole, and a knowledge of as much of the technical work of a library, as can be compressed into the six weeks of close work.

SUBJECTS

In all possible cases instruction will be accompanied by practice-work which will be carefully revised and criticised.

The following subjects will be included in the lectures given during the course:

Note-taking.

Library handwriting.

Book selecting and buying.

Trade bibliography.

Mechanical preparation of books.

Accessioning.

Shelf listing.

Classification.

Author numbers.

Cataloging.

Serials.

Loan systems.

Statistics.

Library work with children.

Reference work.

Reading lists.

Interior arrangement of a library.

Libraries and schools.

Library commissions and traveling libraries.

Library administration.

Binding and repair of books.

State and U. S. publications.

INSTRUCTORS

The School will be under the direction of the Secretary of the Commission who will give lectures on general library subjects, with the needs of the Iowa libraries especially in view. Mr. MALCOLM G. WYER, librarian of the State University, is the resident director, and will have charge of the course in reference work. The instruction will be based upon Miss Kroeger's *Guide to the Study and Use of Reference Books*.

Miss HARRIET E. HOWE, the head cataloger at the University library will give the instruction in accessioning and cataloging; the instruction in cataloging is based on the assumption that the student has had no experience in this work and desires a general knowledge of author, title and subject entries; as much time will be given to the latter as is possible in such a brief course. Miss IRENE WARREN, librarian of the School of Education, University of Chicago, will give the instruction in classification, book numbers, and related subjects.

Library work with children will be especially considered during the last two weeks of the session. A study of children's literature and methods of work with the children, and the conduct of a children's room will be presented by Miss EDNA LYMAN, formerly children's librarian of Oak Park (Ill.) Public Library.

For teachers and others who are in attendance at the Summer Session in other departments, a new course will be given on the care and use of libraries from the teachers' standpoint. This course is not a technical one in records and other matters of library detail, so much as it is one method of making the books of use in the school room. A discussion of the book itself, how it is made, its contents, index, etc., and how we may use it as a tool, will constitute a feature of this course. The fact that Iowa has a law which provides that libraries shall be purchased in every school district, makes it of the greatest importance for teachers to know how to make the books of service, both in the school room and for general reading.

The course will be given during the first four weeks of the Summer Session by Miss WARREN, who brings to this work not only thorough training and experience as a librarian, but

also a knowledge of pedagogical principles gained from study and experience in connection with the School of Education. Probably three hours a week will be necessary for this course, with a certain amount of reading outside the lecture period. Those who are likely to take this course should address Miss ALICE TYLER, State House, Des Moines, Iowa.

Lectures will be given during the course by members of the faculty of the State University and by the Library Commissioners. Librarians of some of our most successful libraries will visit the school and talk upon themes of especial interest.

Books are provided by the Library Commission for the practice work of the students, and the books have been selected with a view to exemplifying the instruction given in the class room. The library of the State University, consisting of about 65,000 volumes, and the public library of Iowa City, of more than 9,000 volumes, are available for the uses of the students.

ENTRANCE REQUIREMENTS

The course is intended especially for Iowa librarians who are in charge of small libraries. Those who have had some experience in library work or who wish to prepare for definite positions, will be given preference. Inasmuch as emphasis is laid on practice-work and prompt technical revision and correction, the number admitted to the class must be limited.

Students will be admitted from other states if they meet the admission requirements, and if the limit of students is not reached by Iowa applicants. Examinations for entrance are not required, but candidates are supposed to have completed a high school course or its equivalent.

As the course in library work with children deals with a subject of general interest, students will be admitted for this course whether engaged in library work or not, and those from other states will be welcomed.

Applications should be made on the blank form to be obtained of the director, Miss ALICE S. TYLER, Iowa Library Commission, Des Moines, and should be sent in not later than May 13, 1907.

The following books will be used in the summer school

(Those marked with an asterisk are published by the United States Bureau of Education, Washington, D. C., and will be sent to any address without charge and should be obtained of the Bureau at once. Others will be on sale at the school.):

Dewey	<i>Simplified library school rules</i>	\$1.25
	<i>Decimal classification (or)</i>	5.00
	<i>Abridged edition (may be used if student owns it)</i>	1.50
*	<i>Papers prepared for World's Library Congress, 1893</i>	Free
*Cutter,	<i>Rules for a dictionary catalogue</i>	Free
	<i>Decimal author table (two-figure)</i>	1.25
American Library Association,	List of subject headings	2.00
Dana,	<i>Library primer</i>	1.00
	<i>A. L. A. Catalogue, 1904</i>.....	.25
Kroeger,	<i>Guide to the study of reference books</i>	1.25

Supplies for practice work may be obtained at the school. The cost of these, aside from the books, will probably not exceed \$5.00.

EXPENSES

The tuition fee in the library school is \$10.00 for the regular course, including the course in library work with children. For this latter course alone the fee will be \$5.00.

For cost of board and rooms see above under EXPENSES of the Summer Session.

REGISTRATION

Students, on coming to the University, should present themselves at the office of the director of the Summer Session, Hall of Liberal Arts, for registration.

Students are requested to register before 12 o'clock, noon, on Monday, June 17, as the class-work will begin at two o'clock on that day.

Address all communications regarding the instruction to Miss ALICE S. TYLER, Secretary Iowa Library Commission, Des Moines, Iowa.

**THE COLLEGE OF APPLIED
SCIENCE**

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.
PRESIDENT.

WILLIAM GALT RAYMOND, C. E., LL. D.
DEAN; Professor of Civil Engineering.

PROFESSORS

CLARK FISHER ANSLEY, B. A.
Professor and Head of the Department of English.

SAMUEL CALVIN, PH. D., LL. D., F. G. S. A.
Professor and Head of the Department of Geology.

ARTHUR HILLYER FORD, B. S., E. E.
Professor and Head of the Department of Electrical Engineering.

KARL EUGEN GUTHE, PH. D.
Professor and Head of the Department of Physics.

THOMAS HUSTON MACBRIDE, PH. D.
Professor and Head of the Department of Botany.

CHARLES SCOTT MAGOWAN, C. E., M. A.
Professor of Municipal and Sanitary Engineering.

ERNEST LINWOOD OHLE, B. S., M. E.
Professor of Steam Engineering, and Head of the Department of Mechanical Engineering.

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.
Professor and Head of the Department of Chemistry and Toxicology.

BOHUMIL SHIMEK, C. E., M. S.
Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium.

ARTHUR GEORGE SMITH, M. A.
Professor of Physics and Mechanics.

LAENAS GIFFORD WELD, M. A.
Professor and Head of the Department of Mathematics, and Dean of the Graduate College.

CHARLES BUNDY WILSON, M. A.

Professor and Head of the Department of German Language and Literature.

Professor and Head of the Department of Mining Engineering.

STEPHENS HAYES BUSH, A. M.

Acting Professor in Charge of Romance Languages.

ASSISTANT PROFESSORS

FREDERICK GOODSON HIGBEE, B. S.

Assistant Professor and Head of the Department of Descriptive Geometry and Drawing.

WILLIAM JAY KARSLAKE, PH. D.

Assistant Professor of Chemistry.

BYRON JAMES LAMBERT, B. PH., B. S., C. E., C. E.

Assistant Professor of Civil Engineering.

HENRY LE DAUM, M. A.

Assistant Professor of Romance Languages.

CARL LEOPOLD VON ENDE, PH. D.

Assistant Professor of Chemistry.

ROBERT BRADFORD WYLIE, PH. D.

Assistant Professor of Botany.

INSTRUCTORS AND ASSISTANTS

FRED GEORGE BAENDER,

Superintendent of Engineering Shops.

RICHARD PHILIP BAKER, B. SC.

Instructor in Mathematics.

FRED JAMES LONGWORTH, A. C.

Instructor in Chemistry.

EDWIN FORD PIPER, M. A.

Instructor in English.

LEE PAUL SIEG, M. S.

Instructor in Physics.

SAM BERKLEY SLOAN, B. A.

Instructor in English.

PHILIP SHERIDAN BIEGLER, B. S. E. E.

Acting Instructor in Civil and Electrical Engineering, 1906.

JOHN FRANKLIN REILLY, A. M.

Acting Instructor in Mathematics.

CHARLES GAMBLE SIMPSON, M. A.

Acting Instructor in Mathematics.

JAMES BRECKENRIDGE SPRAKE, B. M. E.

Acting Instructor in Descriptive Geometry and Drawing.

PAUL FREDERICK EDINGER, B. A.

Assistant Instructor in Geology.

EMIL LEONARD LUNDGREN, B. S. C. E.

Assistant Instructor in Civil Engineering.

RALPH EUGENE ROOT, B. S.

Assistant Instructor in Mathematics.

THOMAS STANLEY ARMSTRONG, M. E.

Assistant in the Engineering Shops.

HARRY DICK BUCHANAN SHAW.

Assistant in Shopwork.

MARCIA ORINTHA DUNHAM.

Secretary to the Dean.

MEMBERS OF FACULTIES OF OTHER COLLEGES GIVING INSTRUCTION TO STUDENTS IN THE COLLEGE OF APPLIED SCIENCE

HENRY ALBERT, M. S., M. D.

Professor of Pathology and Bacteriology.

GILBERT LOGAN HOUSER, PH. D.

Professor of Animal Biology, and Director of the Zoological Laboratories.

CHARLES WARREN WEEKS, B. S.

Professor of Military Science and Tactics, and Commandant of the Cadet Battalion, 1905.

HENRY FREDERICK WICKHAM, M. S.

Professor of Entomology, and Assistant Curator of the Museum of Natural History.

CLARENCE WILLIS EASTMAN, PH. D.

Assistant Professor of German.

FREDERICK BERNARD STUM, B. A.

Assistant Professor of German.

FRANK DE WITT WASHBURN, A. B.

Assistant Professor in Charge of Fine Arts.

LEWIS HENRY HANEY, PH. D.

Instructor in Economics.

THE COLLEGE OF APPLIED SCIENCE

HALL OF ENGINEERING

The Legislature of 1904 provided funds for a new Hall of Engineering, plans for which have been made, and a portion of the building has been constructed. The completed portion, which is three stories high, occupies a plot about 65 feet by 125 feet on the corner of Capitol and Washington streets. An extension more than doubling the present capacity will be built in the summer of 1907.

When entirely completed, the new building will have a frontage on Capitol street of 320 feet, with wings on Washington and College streets 200 feet deep, enclosing a square within which will be located four large shops and two laboratories. The main building will provide recitation, lecture, drawing, and study rooms, library, and auditorium. The building is designed to afford complete accommodation for individual instruction, separate study space for 600 students being provided.

LABORATORIES, SHOPS, AND EQUIPMENT

For description see pages 43 to 47, and 59.

THE ENGINEERING SOCIETY

The students of the engineering departments maintain a society which meets weekly. Its members review the principal technical journals, and prepare and deliver special papers on engineering subjects. From time to time prominent engineers in practice lecture before the society. Members of the faculty take an active interest in this society.

THE TRANSIT

The Transit is an engineering periodical published annually by the University. It is edited by a committee of the Engineering Society, and contains technical papers of considerable value prepared by alumni, undergraduate students, and members of the engineering faculty. Its articles are frequently reprinted in the technical press.

DEGREES

The degree of Bachelor of Science is granted upon the completion of an engineering course or a course in Chemistry, the diploma stating in which department the degree was earned.

Professional degrees are granted to graduates in engineering who are twenty-five years of age, and who have completed four years of professional work, one of which has been in responsible charge, and one of which may have been graduate work in the University. Application for detailed information should be made to the dean of the college.

EXPENSES

For expenses, scholarships, and prizes see pages 72 to 77.

REQUIREMENTS FOR ADMISSION

For statement of requirement for admission see pages 87 to 99; but for courses in engineering and chemistry solid geometry must be offered.

COURSES OF STUDY

GENERAL NOTE ON THE ENGINEERING COURSES

The courses of study in engineering are designed to insure a thorough grounding in the fundamental principles underlying all engineering practice, and also to enable the student to specialize, so far as is deemed wise in an undergraduate course, in civil, sanitary, mechanical, electrical, mining, chemical, or forest engineering.

The work in the engineering courses is prescribed and one complete course extending through four years must be covered, in order to secure the bachelor's degree in science in engineering.

Instruction in the engineering department is by recitation, lecture, and laboratory work. The recitation method is followed so far as practicable. A sufficient amount of field and laboratory work is given to fix thoroughly the principles taught in the class room, and to give the student sufficient skill in elementary engineering operations to enable him to undertake such work immediately upon graduation. Much attention is paid to the design of engineering structures, machines, and processes, that the graduate may be competent to design bridges, structures in masonry, water supply and sewerage systems, prime movers, and machinery; to lay out and supervise the construction of power plants; and to direct and report upon mines, mining properties, metallurgical, and chemical processes.

Laboratory work requiring no preparation will be rated hour for hour at one-third time value of class room exercises requiring preparation, that is to say, a three-hour laboratory period will be considered equivalent to a single hour lecture or recitation.

A thesis is required for graduation. In general this

thesis must be a report upon an original investigation of some engineering problem, or a complete design for some engineering structure, machine, or plant.

CHEMICAL ENGINEERING

The increasing activity in American manufacturing has created a demand for trained men to take charge of the management of processes which involve a knowledge of the principles of both chemistry and mechanical engineering for their successful operation. The course in Chemical Engineering is intended to prepare men who wish to devote themselves to one of the chemical industries, by laying a foundation for efficient work in their selected field.

COURSE IN CHEMISTRY

This is designed to meet the demand for trained chemists as teachers, investigators, analysts, or professional workers in some of the other lines of technical or applied chemistry. It extends through four years and the degree of Bachelor of Science (in chemistry) will be conferred upon those who complete it successfully. The first three years are devoted to the fundamental branches, together with other University courses so closely allied as to be indispensable to the chemist. In the last year such a choice of electives is offered as to enable the student either to broaden materially his field or to devote himself to advanced work in some special part. The degree of Master of Science may be gained by one year's additional study in the University; that of Doctor of Philosophy in three years after the acquisition of the baccalaureate degree.

The essentials of the course are:

Ten semester-hours of English.

Sixty semester-hours as a minimum in chemical branches, which must include the equivalent of forty semester-hours in general, physical, and organic chemistry, with qualitative and quantitative analysis.

Two years of German.

One year each of mathematics, physics, and French.

(For the foreign languages preparatory work in the same subjects may be offered as a substitute for University work).

The total requirement is 136 semester-hours.

The arrangement shown in the synopsis given below is desirable, although it may be varied with the consent of the head of the department.

FOREST ENGINEERING

The course in forest engineering is offered to meet so far as possible, the demands for trained specialists, as well as to afford wider general information on forestry subjects. It extends over four collegiate years, with additional field work, and includes the fundamentals of the course in civil engineering.

SYNOPSIS OF COURSES

Descriptions of the several courses of study will be found on pages 59 ff. In the following synopses of work required in the engineering courses the numbers attached to the titles are those used in the descriptions. Odd numbers indicate work in the first semester; even numbers, work in the second semester. The letters a and b following these numbers indicate respectively the first and second halves of the semester.

CIVIL ENGINEERING

Freshman Year

	First Semester	Second Semester
English 101 (102),	2 hours	2 hours
Mathematics (1st year, Group A),	5 hours	5 hours
Drawing (Engin. 1),	5 hours	
Descriptive geometry (Engin. 2),		5 hours
Chemistry 3 and 105,	5 hours	
Surveying (Engin. 14),		5 hours
Military Drill,*	1 hour	1 hour
	<hr/>	<hr/>
	18 hours	18 hours

*See military requirements page 205.

Sophomore Year

English 121 (122),	1 hour	1 hour
Mathematics (2d year, Group A),	5 hours	5 hours
Physics 3 (4),	6 hours	6 hours
Mineralogy (Geol. 3),	2½ hours	
Geology 4,		2½ hours
Botany 25,	2½ hours	
Surveying (Engin. 18),		3½ hours
Topographical drawing (Engin. 5),	1 hour	
Military Drill,	1 hour	1 hour
	<hr/>	<hr/>
	19 hours	19 hours

Junior Year

English 131 (132),	1 hour	1 hour
Mechanics (Phys. 13),	5 hours	
Materials of Engineering (Engin. 22),		5 hours
Statics. [Engin. 19 (20)],	3 hours	3 hours
Economics 3a,	2½ hours	
Hydraulics (Engin. 25b),	2½ hours	
Water supply and sewerage (Engin. 28b),		2½ hours
Metallurgy (Chem. 34a),		2½ hours
Highways (Engin. 26a),		1 hour
Architecture (Engin. 31a),	1½ hours	
Water analysis (Chem. 161),	1 hour	
Bacteriology 21,	½ hour	
Astronomy and geodesy (108),		3 hours
	<hr/>	<hr/>
	17 hours	17 hours

Senior Year

English 141 (142),	1 hour	1 hour
Electrical engineering 59 (60),	5 hours	5 hours
Structural design [Engin. 23 (24)],	5 hours	5 hours
Thermodynamics and prime movers (Engin. 39),	5 hours	
Railroad engineering (Engin. 32a),		2½ hours
Contracts (Engin. 26b),		2½ hours
Thesis 100	<hr/>	<hr/>
	16 hours	16 hours

SANITARY ENGINEERING

The course in civil engineering is an excellent basis for the work of the sanitary engineer, but for those who wish to specialize in sanitary work a course has been arranged founded on the course in civil engineering, but introducing a more extensive study of bacteriology and water analysis, a course in biology, and a course in sanitary inspection, design, and construction. These subjects replace astronomy and geodesy, metallurgy, and architecture in the junior year, and one semester of structural design in the senior year of the civil engineering course.

MECHANICAL ENGINEERING

Freshman Year

	First Semester	Second Semester
English 101 (102),	2 hours	2 hours
Mathematics (1st year, Group A),	5 hours	5 hours
Drawing (Engin. 1),	5 hours	
Descriptive geometry (Engin. 2),		5 hours
Chemistry 4, 106,		5 hours
Shopwork (Engin. 9),	5 hours	
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	18 hours	18 hours

Sophomore Year

English 121 (122),	1 hour	1 hour
Mathematics (2d year, Group A),	5 hours	5 hours
Physics 3 (4),	6 hours	6 hours
Surveying (Engin. 15),	5 hours	
Shopwork (Engin. 10),		3 hours
Kinematics (Engin. 34 and 6),		3 hours
Machine drawing (Engin. 3),	1 hour	
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	19 hours	19 hours

Junior Year

English 131 (132),	1 hour	1 hour
Mechanics (Phys. 13),	5 hours	
Materials of engineering (Engin. 22),		5 hours
Statics (Engin. 19),	3 hours	
Economics, 3a,	2½ hours	
Hydraulics (Engin. 25b),	2½ hours	
Thermodynamics, heat engines (Engin. 40),		5 hours
Kinematics (Engin. 35 and 7),	3 hours	
Advanced shopwork (Engin. 12),		2 hours
Metallurgy (Chem. 34a),		1½ hours
Hydraulic machinery (Engin. 46b),		1½ hours
Mechanical laboratory (Engin. 42),		1 hour
	<hr/>	<hr/>
	17 hours	17 hours

Senior Year

English 141 (142),	1 hour	1 hour
Electrical engineering 59 (60),	5 hours	5 hours
Heat engines (Engin. 41),	5 hours	
Machine design (Engin 37),	3 hours	
Machine design drawing (Engin. 8a),		2½ hours
Steam engineering laboratory [Engin. 43 (44)],	2 hours	2 hours
Contracts (Engin. 26b),		2½ hours
Heating and ventilating (Engin. 36a),		1 hour
Factory management (Engin. 36b),		1 hour
Thesis 100		
	<hr/>	<hr/>
	16 hours	15 hours

ELECTRICAL ENGINEERING

The work of the freshman and sophomore years is the same as in mechanical engineering. .

Junior Year

	First Semester	Second Semester
English 131 (132),	1 hour	1 hour
Mechanics (Phys. 13),	5 hours	
Materials of engineering (Engin. 22),		5 hours
Electrical measurements (Phys. 9),	3 hours	
Electrical engineering (Engin. 51),	3 hours	
The electric circuit (Engin. 52),		4 hours
Electro chemistry 252,		4 hours
Economics 3a,	2½ hours	
Hydraulics (Engin. 25b),	2½ hours	
Metallurgy (Chem. 34a),		1½ hours
Hydraulic machinery (Engin. 46b),		1½ hours
	<hr/>	<hr/>
	17 hours	17 hours

Senior Year

English 141 (142),	1 hour	1 hour
Thermodynamics and prime movers (Engin. 39),	5 hours	
Dynamo electric machinery [Engin. 53 (54a)],	3 hours	2½ hours
Machine design (Engin. 37),	3 hours	
Steam engine laboratory (Engin. 43),	2 hours	
Electrical testing [Engin. 55 (56)],	2 hours	2 hours
Telephone and telegraph (Engin. 62a),		2½ hours
Electrical power stations (Engin. . 64b),		2½ hours
Contracts (Engin. 26b),		2½ hours
Thesis 100		
	<hr/>	<hr/>
	16 hours	13 hours

MINING ENGINEERING

Freshman Year

	First Semester	Second Semester
English 101 (102),	2 hours	2 hours
Mathematics (1st year, Group A),	5 hours	5 hours
Drawing (Engin. 1),	5 hours	
Descriptive geometry (Engin. 2),		5 hours
Chemistry 3, 105,	5 hours	
Chemistry 156,		2 hours
Surveying (Engin. 16),		3½ hours
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	18 hours	18½ hours

Sophomore Year

English 121 (122),	1 hour	1 hour
Mathematics (2d year, Group A),	5 hours	5 hours
Physics 3 (4),	6 hours	6 hours
Chemistry 155,	3 hours	
Electro chemistry 252,		4 hours
Geology 1 (2),	2 hours	2 hours
Machine drawing (Engin. 3),	1 hour	
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	19 hours	19 hours

Junior Year

Mechanics (Phys. 13),	5 hours	
Materials of engineering (Engin. 22),		5 hours
Assaying (Chem. 168),		5 hours
Mineralogy (Geol. 32),		5 hours
Ore dressing (Engin. 75a),	2½ hours	
Hydraulics (Engin. 25b),	2½ hours	
Statics [Engin. 19 (20) part],	2 hours	2 hours
Optical properties of crystals Phys. 11),	2 hours	
Petrology (Geol. 11),	8 hours	
	<hr/>	<hr/>
	17 hours	17 hours

Senior Year

Mining [Engin. 77 (78)],	5 hours	5 hours
Thermodynamics and prime movers (Engin. 39),	5 hours	
Electrical engineering (Engin. 58),		5 hours
Metallurgy [Chem. 31 (32)],	3 hours	3 hours
Ore deposits [Geol. 33 (34)],	2 hours	2 hours
Mining law,	1 hour	1 hour
Thesis 100	<hr/>	<hr/>
	16 hours	16 hours

CHEMICAL ENGINEERING

The work of the freshman year is the same as in Mechanical Engineering.

Sophomore Year

	First Semester	Second Semester
English 121 (122),	1 hour	1 hour
Mathematics (2d year, Group A),	5 hours	5 hours
Physics 3 (4),	6 hours	6 hours
Mineralogy (Geol. 3),	2½ hours	
Geology 4,		2½ hours
Quantitative analysis 155 (156),	2½ hours	3½ hours
Machine drawing (Engin. 3),	1 hour	
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	19 hours	19 hours

Junior Year

English 131 (132),	1 hour	1 hour
Mechanics (Phys. 13),	5 hours	
Materials of engineering (Engin. 22),		5 hours
Metallurgy 31 (32),	3 hours	3 hours
Organic chemistry 201 (202),	3 hours	3 hours
Organic chemistry 203 (204),	2 hours	2 hours
Electro-chemistry 252,		4 hours
Gas analysis 169a,	1½ hours	
Hydraulics (Engin. 25b),	2½ hours	
	<hr/>	<hr/>
	18 hours	18 hours

Senior Year

English 141 (142),	1 hour	1 hour
Industrial chemistry 51-54,	3 hours	3 hours
Engineering chemistry,		2½ hours
Contracts (Engin. 26b),		2½ hours
Electrical engineering 59 (60),	5 hours	5 hours
Thermodynamics, etc. (Engin. 39),	5 hours	
Surveying (Engin. 15),	3½ hours	
Factory management (Engin. 36b),		1 hour
Thesis 100		
	<hr/>	<hr/>
	17½ hours	15 hours

CHEMISTRY

Freshman Year

	First Semester	Second Semester
English 101 (102),	2 hours	2 hours
Chemstry 1 (2),	3 hours	3 hours
Chemistry 5 (6),	2 hours	2 hours
Mathematics (1st year, Group A),	5 hours	5 hours
German 1 (2),	5 hours	5 hours
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	18 hours	18 hours

Sophomore Year

English 121 (122),	1 hour	1 hour
Physics 3 (4),	6 hours	6 hours
German 3 (4),	3 hours	3 hours
Qualitative analysis 103 (104),	3 hours	1½ hours
Theory of analytical chemistry 129,	1 hour	
Inorganic Preparations 12b,		1½ hours
And of the following enough to make 16 to 18 hours—		
Physiological chemistry 227 (228),		
229 (230),	3 hours	3 hours
Mineralogy [Geol. 11 (12)],	3 hours	3 hours
Mathematics (2d year, Group A),	5 hours	5 hours
Animal biology [Zoology 1 (2)],	4 hours	4 hours
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	17 to 18 hrs	16 to 18 hrs

Junior Year

English 131 (132),	1 hour	1 hour
Organic chemistry 201 (202),	3 hours	3 hours
Organic chemistry 203 (204),	3 hours	3 hours
Quantitative analysis 151 (152),	3 hours	3 hours
Physical chemistry 251 (252),	2 hours	3 hours
Physical chemistry 253,	1 hour	
French 1 (2),	5 hours	5 hours
	<hr/>	<hr/>
	18 hours	18 hours

Senior Year

English 141 (142),	1 hour	1 hour
Chemical seminar 281 (282),	1 hour	1 hour
And of the following, or of courses not previously pur- sued, enough to make 17 hours.		
Elective, any course in the Uni- versity,	5 hours	5 hours
History of chemistry 42,		1 hour
Applied electro-chemistry 255,	1 hour	1 hour
Electro-chemical preparations 257 (258),	1 hour	1 hour
Electro-chemical analysis 157 (158),	1 hour	1 hour
Organic analysis 160,		1 hour
Advanced quantitative analysis 153 (154),	1 to 5 hrs.	1 to 5 hrs.
Advanced physiological chemistry 231 (232),	3 hours	3 hours
Advanced physical chemistry 259 (260),	1 hour	1 hour
Advanced organic chemistry 205 (206),	3 to 5 hrs.	3 to 5 hrs.
Assaying 168,		1 hour
Metallurgy 31 (32),	3 hours	3 hours

Toxicological analysis 165 (166),	2 hours	2 hours
Industrial chemistry 51(52), 53(54),	3 hours	3 hours
Sanitary chemistry 161, 163 (164),	3 hours	3 hours
Gas analysis (169a),	1½ hours	
	<hr/>	<hr/>
	17 hours	17 hours

FOREST ENGINEERING

Freshman Year

	First Semester	Second Semester
English 101 (102),	2 hours	2 hours
Mathematics (1st year, Group C),	4 hours	4 hours
Drawing (Engin. 1),	5 hours	
Descriptive geometry (Engin. 2),		5 hours
Chemistry 4, 106,		5 hours
Plant morphology (Bot. 7),	4 hours	
Plant Histology and Physiology,		
1(2),	2 hours	2 hours
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	18 hours	19 hours

Sophomore Year

English 121 (122),	1 hour	1 hour
Mathematics (2d year, Group C),	4 hours	4 hours
Physics 3 (4),	6 hours	6 hours
Bacteriology 21,	1 hour	
Plant ecology [Bot. 5 (6)],	2 hours	2 hours
Timber Technology (Bot. 39),	2 hours	
Geology 4,		2½ hours
Plant taxonomy (Bot. 3),	2 hours	
Surveying (Engin. 16),		3½ hours
Military drill,	1 hour	1 hour
	<hr/>	<hr/>
	19 hours	20 hours

Junior Year

German or French 1 (2),	5 hours	5 hours
Meteorol. and climatology (Phys. 20),	2 hours	2 hours
Mechanics (Phys. 13),	5 hours	
Materials of engineering (Engin. 22),		5 hours
Hydraulics (Engin. 25b),	2½ hours	
Forest mensuration (Bot. 38),		1 hour
Plant Pathology (Bot. 20),		2 hours
Topographic Drawing (Engin. 5),	1 hour	
Arboriculture [Bot. 33 (34)],	2½ hours	
	<hr/>	<hr/>
	18 hours	17 hours

Senior Year

Bridge Design (Engin. 27),	2 hours	
Forestry in the U. S. (Bot. 45),	3 hours	
Silviculture (Bot. 35),	3 hours	
Forest management (Bot. 36),		3 hours
Practical zoology 11 (12),	3 hours	3 hours
Lumbering (Bot. 41),	2 hours	
Forest protection (Bot. 43),	2 hours	
History of forestry (Bot. 40),		2 hours
Forest products (Bot. 42),		3 hours
Parks (Bot. 37),	2 hours	
Surveying (Engin. 18),		3½ hours
Highways (Engin. 26a),		1 hour
Elective,		1½ hours
	<hr/>	<hr/>
	17 hours	17 hours

Throughout the course the equivalent of at least one scheduled hour of work is done in the field on Saturdays.

DESCRIPTION OF COURSES

ASTRONOMY

PROFESSOR WELD

For description of courses see pages 111, 112.

BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL, MR. BYRNES, MR. RICHARDS

*21. BACTERIOLOGY OF WATER.

A didactic, recitation, demonstration, and laboratory course designed to give the student a knowledge of the principles and working methods used in bacteriology, especially those concerned in making a bacteriological analysis of water. The course will include such subjects as the classification of micro-organisms, their modes of growth, their cultivation, isolation and identification. The relation of certain organisms to health and disease will also be considered, as well as the different methods of disinfection and sterilization. The student will be expected to acquire a working knowledge of the methods used in making a quantitative examination of water such as is necessary to determine the degree of bacterial contamination, or to determine the efficiency of the method of filtration processes. He will also be expected to be able to make the more simple presumptive tests for the presence of colon bacilli and other micro-organisms. He should, moreover, gain sufficient knowledge of the subject to enable him to draw deductions from and pass judgment upon, bacteriological examinations. It is not intended, however, that the course should prepare the student to make thorough qualitative bacteriological examinations, especially with reference

*See note at bottom of page 111.

to the isolation of disease-producing germs. For such training it will be necessary for him to take course 3 as outlined below. Course 21 is required of students in civil engineering.

3. GENERAL BACTERIOLOGY.

5 hrs.

A didactic, recitation, demonstration and laboratory course, which includes the preparation of artificial culture-media, the cultivation of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different pathogenic microbes as they are related to the various infectious processes. Special attention is given to the bacteriologic technique of water, and the practical application of bacteriologic technique to hygiene and clinical diagnosis. The didactic lectures will include such subjects as cannot properly be pursued in connection with the laboratory work. About seventy different micro-organisms are studied in the laboratory.

Three class room hours, four laboratory hours, a week.

BOTANY

**PROFESSOR MACBRIDE; PROFESSOR SHIMEK, ASSISTANT
PROFESSOR WYLIE**

For description of courses 1, 2, 3, 5 (6), 7, 20, and 33 to 45, pages 112 to 118. For adaptations of some of these courses see announcement of this college.

CHEMISTRY

**PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE, AS-
SISTANT PROFESSOR KARSLAKE, MR. POORE,
MR. REMINGTON, MR. BROWN, MR. LONG-
WORTH**

Suggestions as to the proper selection of electives as a preparation for teaching, research, or a profession in which chemistry is one of the fundamental branches, will be given by the head of the department. A four year course in chemistry is outlined above.

For descriptive courses see pages 118 to 126.

ECONOMICS

DR. HANEY

For description of courses see 3a, page 180.

ENGINEERING

PROFESSOR RAYMOND; PROFESSOR MAGOWAN, PROFESSOR FORD,
PROFESSOR OHLE, PROFESSOR ———, ASSISTANT PRO-
FESSOR HIGBEE, ASSISTANT PROFESSOR LAMBERT,
MR. BAENDER, MR. BIEGLER, MR. LUNDGREN,
MR. SPRAKE, MR. ARMSTRONG, MR. SHAW

***1 DRAWING.**

5 hrs.

Use of instruments; lettering; geometrical constructions; orthographic, isometric, and cabinet projections; use of flat and graduated tints; tinting with water-colors; working drawings; assembled and detail drawings; free-hand sketches; drawing from sketches; dimensioning; arrangement of views; tracing; blue printing; standard conventions. Assistant Professor HIGBEE; Mr. SPRAKE; Mr. LUNDGREN; Mr. ———.

Fifteen drawing room hours a week.

2. DESCRIPTIVE GEOMETRY.

5 hrs.

Problems on the point, line, and plane, and the application of these problems to practical engineering; single and double curved surfaces; intersections and developments of surfaces; pattern making for sheet metal work; warped surfaces; stereotomy; perspective. Assistant Professor HIGBEE; Mr. SPRAKE; Mr. LUNDGREN; Mr. ———.

Three recitations and six drawing rooms hours a week.

3. MACHINE DRAWING.

1 hr.

Free-hand sketches of machine and machine parts; finished, assembled, and detailed drawing of machine and machine parts; reading working drawings; drafting office practice. This course is not a course in designing but is intended to illustrate the general method of making shop drawings of ma-

*See note at bottom of page 111.

chines and machine parts already designed and built. For this purpose, special use will be made of the machine tools in the shop. Prerequisite, engineering 1. Assistant Professor HIGBEE.

Three drawing room hours a week.

5. TOPOGRAPHICAL DRAWING.

1 hr.

Topographical conventions; maps illustrating methods of showing topography for railroad location, allotments and subdivisions of lands, parks, and engineering improvements in general. As this course will be correlated with the course in surveying, it will serve to enable the student to represent on drawings the character and contour of the ground he has already measured in the field. Assistant Professor HIGBEE.

Three drawing room hours a week.

6 (7). KINEMATICS DRAWING.

1 hr.

Design of cycloidal, involute, and bevel gears; cams; link and parallel motions; couplings; fastenings. This course is correlated with the course in kinematics, and gives the student a practical acquaintance with the problems in transmission of motion, the theory of which he has already studied. Prerequisite, Engineering 1, 34 (35). Assistant Professor HIGBEE.

Three drawing room hours a week.

8a. MACHINE DESIGN DRAWING.

5 hrs.

The designing and making complete detail and assembly drawings of machines, including the design of a horizontal or vertical return tubular boiler, and a simple or compound steam engine. Prerequisite, Engineering 37. Assistant Professor HIGBEE.

Third quarter; fifteen drawing room hours a week.

9. SHOPWORK.

5 hrs.

Woodwork and forging: (a) Bench and lathe work in wood, including joinery, turning and pattern making, and the care and use of all wood-working tools. (b) Forging of iron and steel, welding, hardening, tempering and annealing, proper selection of steel for tools of various kinds, and special methods of tempering. Mr. BAENDER; Mr. ———.

Fifteen hours a week.

10. SHOPWORK. 3 hrs.

Bench and machine work in metals: This includes chiseling, filing, scraping, lathe work; use of planer, shaper, milling machines and grinder; screw cutting, etc. Mr. BAENDER; Mr. SHAW.

Nine hours a week.

12. ADVANCED SHOPWORK—Tool making. 2 hrs.

This course follows the course in kinematics, and will be given only to those who have completed course 10. The student will make various forms of milling cutters, twist drills, taps, reamers, and gear wheels. The tools will be hardened, tempered, and ground. Mr. BAENDER; Mr. SHAW.

Six hours a week.

13. SURVEYING. 5 hrs.

Theory and use of field instruments; leveling; farm and city surveying; United States public lands; topographical, hydrographical, and mine surveying; simple curves; volumes. Prerequisites, Mathematics 21a, 23b. Professor RAYMOND; Professor MAGOWAN; Mr. LUNDGREN.

Equivalent of three and one-half class room hours a week, with field work three afternoons each week during the first quarter.

14. SURVEYING—Same as Surveying 13. 5 hrs.

Professor RAYMOND; Professor MAGOWAN; Mr. LUNDGREN.

The equivalent of three and one-half class room hours a week, with field work three afternoons each week during the fourth quarter.

15. SURVEYING. 3 and 4 hrs.

The theory and use of field instruments; leveling; United States public lands; land, topographical, and mine surveying; railroad curves and volumes. Prerequisites, Mathematics 21a and 23b. Professor RAYMOND; Professor MAGOWAN; Mr. LUNDGREN.

Three class room hours each week, with field work on Saturday forenoons during the first quarter.

16. SURVEYING.**3 and 4 hrs.**

Same as Surveying 15. Professor RAYMOND; Professor MAGOWAN; Mr. LUNDGREEN.

Three class room hours each week, with field work on Saturday forenoons during the fourth quarter.

18. SURVEYING.**3 and 4 hrs.**

surveys; simple, compound and spiral curves; the laying out and measurement of work; the making of maps, profiles and estimates. Prerequisite, Engineering 14, 15 or 16. Professor RAYMOND; Professor MAGOWAN; Mr. ———.

Three class room hours a week and field work Saturday forenoons during the fourth quarter.

19 (20). STATICS.**3 hrs.**

This course embraces a study of the graphical and analytical determination of stresses in roof trusses, bridges, trestles, and towers, and also the amount of their deflection under assumed loads. All modern types of roof and bridge structures are discussed, particular emphasis being placed on those of most common occurrence. Prerequisite, Physics 13. Assistant Professor LAMBERT.

Two class room hours and three drawing room hours a week.

22. MATERIALS OF ENGINEERING—Theoretical and Experimental.**5 hrs.**

Mathematical theory of stresses in beams, columns, shafts, plates, hooks and links, cylinders and spheres. The physical characteristics of the common materials of engineering are determined by laboratory tests. Prerequisites, Mathematics 25 and 26a, Physics 3, 4, and 13. Assistant Professor LAMBERT.

Five class room hours a week with work in testing laboratory during the fourth quarter.

23 (24). STRUCTURAL DESIGN.**5 hrs.**

This course begins with a thorough study of the details of existing structures, the data being obtained in the field, and from blue-prints and photographs. A part of the first quarter is also devoted to a study of masonry construction, including the manufacture and uses of cements, and concretes, reinforced and plain.

Each student is required to make a complete design, including a general drawing traced and blue-printed, of a roof truss, plate girder, pin connected or rivetted truss, a stone arch, a reinforced concrete arch, and a high masonry dam. Prerequisites, Engineering 19, 20, 22. Assistant Professor LAMBERT.

Five periods a week will be divided between recitation and drawing room work as required.

25b. HYDRAULICS, HYDROSTATICS, AND HYDRODYNAMICS. 5 hrs.

Theory and measurement of flow through orifices, tubes and pipes, over weirs, in conduits, rivers, and canals; text book work with illustrative laboratory practice. Prerequisite, Physics 13. Professor MAGOWAN.

26a. HIGHWAYS.

2 hrs.

A study of the good-roads problem from the standpoints of economy and administration; construction and maintenance of country highways and city streets and walks; cleaning of city streets; desirability and cost of the various kinds of pavements, together with the consideration of street grades and cross sections; methods of assessing costs of construction. Professor MAGOWAN.

26b. CONTRACT LAW AND SPECIFICATIONS.

5 hrs.

A study of the fundamental principles of contract law; the application of these principles in formulating and interpreting contracts; the critical study of form and matter of specifications for engineering works. Professor MAGOWAN.

27. BRIDGE DESIGN.

2 hrs.

A brief course in simple highway bridge design for students in forest engineering. Assistant Professor LAMBERT.

28b. WATER SUPPLY AND SEWERAGE.

5 hrs.

(a) The sources of public water supply; methods of collecting, storing and purifying and standards of purity of potable water; principal features of water works construction, including reservoirs, filtering plants, and distributing systems. (b) Design of sewers and sewer systems, both separate and combined; cleaning of cities and towns; methods of sewage disposal. Sewer details as found in modern plans and specifications are carefully studied and attention is paid to the item of cost. Prerequisite, Engineering 25b. Professor MAGOWAN.

30. SANITARY INSPECTION, DESIGN, AND CONSTRUCTION. 4 hra.

A study of house plumbing methods; construction, maintenance and inspection of plumbing fixtures and systems; problems in design; designs for estimates of cost of water supply and sewerage systems and purification plants. Prerequisites, Engineering 25b, 28b. Professor MAGOWAN.

31a. ARCHITECTURE AND BUILDING CONSTRUCTION. 3 hra.

History of architecture and principal details of building construction. Assistant Professor WASHBURN.

32a. RAILROAD ENGINEERING. 5 hra.

Train, curve, and grade resistance, momentum grades; hauling capacity of locomotives; operating expense; railroad location and construction. Prerequisites, Engineering 18, Physics 13. Professor RAYMOND.

34 (35). KINEMATICS. 2 hra.

The principles of mechanism showing the geometrical construction and proper forms for rolling curves, gear teeth, cams, link-motion, and trains of mechanism. Prerequisite, Engineering 1, 2, 3, and 9. Mathematics 23b and 24. To be accompanied by Engin. 6 (7). Professor OHLE.

36a. HEATING AND VENTILATING. 2 hra.

Principles of ventilation; amount of air required for warming; radiating surfaces; radiators and heating surfaces; systems of piping; steam and hot water systems; hot air; mechanical ventilators; heating with electricity. Prerequisites, Engineering 40 and 41. Professor OHLE.

36b. FACTORY MANAGEMENT. 2 hra.

Lectures and assigned readings upon modern methods of factory administration; arrangement and construction of shops; cost of power; transmission of power; cost of labor and material; cost systems and a general study of the commercial side of manufacturing. Prerequisites, Engineering 40 and 41, or 39. Professor OHLE.

37. MACHINE DESIGN. 3 hra.

The application of the laws of velocity, force and strength of materials to the design of machinery, including shells, tubes, plates, machine frames, toothed and belt gearing, shafts,

journals and hangers, springs, bolts, keys, etc., etc. Prerequisites, Engineering 6, 7, 12, 22, 34, and 35. Professor OHLE.

39. THERMODYNAMICS AND PRIME MOVERS. 5 hrs.

Brief course in thermodynamics, general principles underlying the design of boilers, steam engines, gas engines, and refrigerating machinery. Prerequisites, Physics 3 and 4, Mathematics 25 and 26a. Professor OHLE.

40 (41). THERMODYNAMICS AND HEAT ENGINES. 5 hrs.

The laws of thermodynamics and their applications to perfect gases, saturated and superheated vapors; the thermodynamics of the steam engine; valve and valve diagrams; link motions; governors; fly wheels; steam engine performance; hot air engines; gas and oil engines; air compressors; refrigerating machinery; fuels; boilers and steam generators; stokers; natural and artificial draft; chimney design; smoke prevention; testing and care of boilers. Prerequisites, Engineering 34 and 35, Physics 3 and 4, Mathematics 25 and 26a. Professor OHLE.

42. MECHANICAL LABORATORY. 3 hrs.

Measurements of power by means of the brake and dynamometer, and the determination of the efficiency of complete machines. Prerequisites, Engineering 9, 34, 35. Professor OHLE.

43 (44). STEAM ENGINEERING LABORATORY. 2 hrs.

Calibration of gauges, thermometers, and indicator springs; calorimetry; valve setting; efficiency tests of condensers, boilers, steam and gas engines, and of complete plants. Prerequisite, Engineering 39 or 42, and to accompany Engineering 41. Professor OHLE.

Students in Electrical Engineering take this course six hours a week during the first semester.

46b. HYDRAULIC MACHINERY. 3 hrs.

A study of the theory and design of overshot, breast, and undershot wheels; impulse wheels; impulse and reaction turbines. Prerequisite, Engineering 25b. Professor OHLE.

51. ELECTRICAL ENGINEERING. 3 hrs.

An elementary course on the production, distribution, and

utilization of electrical energy; designed as an introduction to the extended courses dealing with particular classes of apparatus. Prerequisite, Physics 3 and 4. Professor FORD.

52. THE ELECTRIC CIRCUIT. 4 hra.

A quantitative study of electric and magnetic fields and the electric circuit. The subject matter of this course forms the foundation for all the courses dealing with particular classes of apparatus. Prerequisite, Physics 3 and 4 and Mathematics, Group A. Professor FORD; Mr. BIEGLER.

Three class room hours and one laboratory period a week.

53 (54a). DYNAMO ELECTRIC MACHINERY. 3 and 5 hra.

A detailed study of the construction, operation and design of dynamo electric machines, including transformers, synchronous machines, commutating machines, rectifying machines, synchronous commutating machines and induction machines. Prerequisite, Engineering 51 and 52. Professor FORD.

First semester; three class room hours a week, third quarter; five class room hours a week.

55 (56). ELECTRICAL TESTING. 2 hra.

A laboratory course to accompany courses 53 and 54a. Prerequisite, Engineering, 51 and 52. Professor FORD; Mr. BIEGLER.

Six hours a week.

58. ELECTRICAL ENGINEERING. 5 hra.

A brief course on the production, distribution and utilization of electrical energy, the operation of electric machines and signaling systems. Prerequisite, Physics 3 (4). Professor FORD; Mr. BIEGLER.

Four class room hours and one laboratory period a week.

59 (60). ELECTRICAL ENGINEERING. 5 hra.

A general course on the selection and operation of electric machinery, power transmission systems, lights, telephones, etc., for non-electrical engineers. Prerequisite, Physics 3 and 4, Mathematics Group A. Mr. BIEGLER.

Four class room hours and one laboratory period a week.

62a. TELEPHONE AND TELEGRAPH. 5 hra.

A study of the various telephone and telegraph systems in common use. Prerequisite, Engineering 52. Mr. BIEGLER.

64b. ELECTRIC POWER PLANTS.**5 hrs.**

A study of the design and operation of plants for the generation and distribution of electrical energy, with special reference to the question of cost. Prerequisite, Engineering 53 and 54a. Professor FORD.

75a. ORE DRESSING.**5 hrs.**

The principles and theory of ore dressing; hand dressing with continuous belts; crushing; jigging; slime concentration; milling; coal washing; etc. The course consists of lectures, recitations, and laboratory work. Ample practice is given in the concentrating mill which forms a part of the university equipment. Professor ———.

77 (78). MINING.**5 hrs.**

Excavating; prospecting by pits and borings; support of excavations; coal mining; vein mining. Discussion of machinery and appliances in mine equipment; hoisting; drainage; air compression; ventilation; underground haulage; design of mine plant. Professor ———.

80. Field courses in mining will be given at the end of the sophomore and junior years.

100. THESIS.

The thesis consists of a complete design for an engineering structure or a report upon an original investigation of a technical problem.

GEOLOGY

PROFESSOR CALVIN; PROFESSOR WILDER, MR. EDINGER

For description of courses see pages 145 to 149.

LANGUAGES**ENGLISH**

MR. SLOAN; MR. PIPER

For description of courses see 101 to 142, pages 134, 135.

FRENCH

ACTING PROFESSOR BUSH; ASSISTANT PROFESSOR LE DAUM,
MISS VOSS, MR. MITCHELL

For description of courses see 1 to 6, pages 189, 190.

GERMAN

PROFESSOR WILSON; ASSISTANT PROFESSOR STURM.
ASSISTANT PROFESSOR EASTMAN, MR. KOEHLER

For description of courses see 1 to 4, page 150.

SPANISH

ASSISTANT PROFESSOR LE DAUM

For description of courses see 1 (2), page 192.

MATHEMATICS

PROFESSOR WELD; MR. BAKER, DR. WAHLIN, MR. REILLY,
MR. SIMPSON, MR. ROOT, MR. ———

For description of course see pages 164 to 172.

PHYSICS

PROFESSOR GUTHE; PROFESSOR SMITH, MR. SIEG, MR.
WORTHING, MR. WOOD

For description of courses see page 177.

ZOOLOGY

PROFESSOR NUTTING; PROFESSOR HOUSER, PROFESSOR WICK-
HAM, DR. STROMSTEN

*For description of courses see 1 (2), 11 (12), pages 198
and 201.*

MILITARY SCIENCE AND TACTICS

LIEUTENANT WEEKS

For requirements see pages 205 to 209.

PHYSICAL TRAINING AND ATHLETICS

MR. RULE, MR. CATLIN

For requirements see pages 209 to 211.

THE COLLEGE OF LAW

THE COLLEGE OF LAW

FACULTY

GEORGE EDWIN MACLEAN, PH. D., LL.D.

PRESIDENT.

CHARLES NOBLE GREGORY, M. A., LL. D.

DEAN; and Professor of Law.

SAMUEL HAYES, M. S., LL. B.

Professor of Law.

ELMER ALMY WILCOX, B. A.

Professor of Law.

LAWRENCE MARSHALL BYERS, M. A., LL. B.

Professor of Pleading and Practice.

BARRY GILBERT, B. A., LL. B.

Professor of Law.

EMLIN MCCLAIN, M. A., LL. D., Justice Supreme Court of Iowa.

Honorary Professor of Jurisprudence.

HORACE EMERSON DEEMER, LL. D., Justice Supreme Court of Iowa.

Honorary Professor of Jurisprudence.

HORACE M. TOWNER, Judge of Third District, State of Iowa.

Lecturer on Constitutional Law.

MARTIN J. WADE, LL. B.

Lecturer on Law.

LIBRARIANS

MERTON LEROY FERSON, M. A., LL. B.

Librarian.

WILLIAM ORAL WATTERS, B. S.

Assistant in the Law Library.

HAROLD STEPHEN GREENLEAF, B. S.

Assistant in the Law Library.

HOWARD OMAR ROGERS.

Assistant in the Law Library.

JAMES PAUL REED, B. S.

Assistant in the Law Library.

GENERAL INFORMATION

LENGTH OF COURSE

The College of Law was organized as a department of the University in 1868, the course of study covering one year. In 1884 the General Assembly passed an act requiring two years' study for all candidates for admission to the bar, and the course of study in this department was extended to the same period. By act of the Twenty-eighth General Assembly (see Acts of the Twenty-eighth General Assembly, Chapter 11, Supplement to Code, § 310) the period of study for admission to the bar was extended to three years, and a preliminary education substantially equivalent to a three years' high school course was required. With the view of conforming the course of study in the College of Law to this legislation and qualifying the graduates of the college for admission to the bar, the board of regents at its meeting in March, 1900, authorized the extension of the course from two to three years. The extension was made and the class of 1901 was the last class to graduate in the two years' course. The course is now one of three years.

INSTRUCTIONAL STAFF

At present the instruction is in the hands of a dean and four resident professors who devote their entire time to the school, and lecturers who give extended courses.

REQUIREMENTS FOR ADMISSION

Graduates or matriculates of reputable universities or colleges, or graduates of state normal schools, may be admitted to the first-year class without examination upon presentation

of diplomas or certificates showing such graduation or matriculation.

Graduates of accredited high schools or academies, or of other schools whose courses of study are approved by the University and are at least four years in length, may be admitted to the first-year class without further examination upon presentation of certificates signed by the superintendent or principal and containing specific statements as to the amount of work done in each subject of study. Blank certificates will be furnished upon application to the President of the University, the Dean of the College of Law, or the University examiner.

All other applicants for admission will be required to pass entrance examinations in *all of the starred subjects* named in the programme given below and in enough of the *other subjects* named to make 6 *additional* credits. The starred subjects are prescribed by the supreme court of Iowa for the preliminary examination of applicants for admission to the bar.

NO FOREIGN LANGUAGE REQUIRED

It will be observed that no foreign language is required, although if a student chooses he may take examinations in any languages scheduled and on passing the same may count the credits secured towards the sum of credits required for admission.

PROGRAM OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

WEDNESDAY, SEPTEMBER 18, TO SATURDAY, SEPTEMBER 21, 1907

Greek,	2 to 4 credits,†	Wednesday,	2:00 P. M.
French,	2 to 4 credits,	Wednesday,	4:00 P. M.
German,	2 to 4 credits,	Thursday,	8:00 A. M.
Latin,	2 to 8 credits	Thursday,	10:00 A. M.
English Grammar,	} 2 credits,	Thursday,	1:30 P. M.
*English and			
Literature,	2 credits,	Thursday,	3:00 P. M.
General History,	2 credits,	Thursday,	4:30 P. M.
*English History,	1 credit,	Friday,	8:00 A. M.

†One preparatory credit is defined as the equivalent of one high school study *five* times a week during a semester at least *eighteen weeks* in length on the basis of *four* studies a day.

***United States**

History,	1 credit,	Friday,	9:00 A. M.
with Elementary Principles of the	}	1 credit, Friday,	10:00 A. M.
*Civil Government			
Government Land Survey,			
Economics,	1 credit,	Friday,	11:00 A. M.
*Algebra, through			
Quadratics,	3 credits,	Friday,	1:30 P. M.
Plane Geometry,	2 credits,	Friday,	3:30 P. M.
Physical Geography,	1 credit,	Friday,	5:00 P. M.
*Physics,	2 credits,	Saturday,	8:00 A. M.
Botany,	1 credit,	Saturday,	9:30 A. M.
Physiology,	1 credit,	Saturday,	10:30 A. M.
*Arithmetic,	1 credit,	Saturday,	1:30 P. M.
*Geography,		Saturday,	2:30 P. M.
*Reading,		Saturday,	3:30 P. M.

Spelling and penmanship will be judged from the manuscripts presented.

SECOND SEMESTER

. The examinations will be held between Thursday, February 6 and Saturday, February 8, 1908, according to a programme which will be posted by the University examiner before the close of the first semester.

For *each separate* examination given at any other time than that announced in the programme which precedes, a fee of *one dollar* will be charged by the University. For a *series* of examinations covering two or more subjects a fee of *two dollars* will be charged.

Any person expecting to enter the College of Law is advised to learn before the opening of the semester exactly what entrance examinations he will be required to pass. He can learn this by addressing the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present at *his first examination as indicated in the programme given above*. He should present himself at once at the office of the university examiner, who will give all necessary directions.

Any student displaying marked illiteracy in English may at any time by the rule of the College of Law be required by the faculty to take instruction in English.

Students will find it to their advantage to enter at the beginning of a semester and best to enter at the beginning of the university year.

ADVANCED STANDING

SECOND YEAR

Applicants for admission to second year standing must comply with the conditions hereinbefore set out for candidates for the first year class, and in addition thereto furnish certificates from approved law schools of work completed in or must pass successful examinations in five of the principal subjects of the first year, or their equivalents, namely: contracts, torts, evidence, agency, conveyancing, domestic relations, and criminal law and procedure; they must also furnish either a certificate showing one year's study of law in a reputable law school, or the affidavit of a member of the bar in regular practice, stating that the applicant has pursued a regular course of study of the law in his office for twelve months. Applicants who have already been admitted to the bar in states where an examination is required, may enter upon presentation of certificate showing admission to practice.

A form of affidavit of study in a law office which may be used is here inserted:

FORM APPROVED BY ATTORNEY-GENERAL,
JUNE 25, 1902.

STATE OF.....

.....COUNTY.

} ss.

....., being first duly sworn, deposes and says that he is a member of the bar of the State of.....
....., in regular practice, and has been such for more than.....years last past. That.....
the applicant for admission to the bar, actually and in good faith pursued a regular course of the study of the law in the office of deponent for the period of.....
....., beginning on the.....day of.....

.....190...., and continuing until the.....day
of.....190....

*And deponent further says that the said.....
was diligent and attentive in the pursuit of his studies, and
that he actually and in good faith devoted the entire time
hereinbefore mentioned to the study of the law.*

.....
*Subscribed in my presence and sworn to before me
this.....day of....., 190....*
.....

THIRD YEAR

Applicants for admission to third year standing must com-
ply with all the conditions hereinbefore set out for candidates
for admission to the first year class, and in addition thereto
furnish certificates from approved law schools of work complet-
ed in or must pass satisfactory examinations in five of the prin-
cipal subjects of the first year course or their equivalents set out
under the provisions governing second year standing; also in
six of the principal subjects of the second year course, viz.:
bills and notes, sales, wills, probate law, partnership, corpora-
tions, equity and equity pleading, real property and extraordi-
nary legal remedies, or the equivalent of these subjects;
they must also present certificates or affidavits showing two
years' study of law as above, one of which must have
been in a reputable law school and the other either in a reputa-
ble law school or in the office of an attorney in active practice.

Students will not be admitted to classes in advance of
their time credits.

Examinations for advanced standing will be held on Sat-
urday, September 21, 1907, at 9:00 A. M., in the Old Capitol
building. They cannot be given at other times.

CREDITS FROM OTHER LAW SCHOOLS

As indicated above, students may be credited for work
completed in other law schools, which are approved, to the ex-
tent of two years, if such work and attendance are duly certi-
fied, without examination in this college.

UNCLASSIFIED STUDENTS

Applicants for admission to the College of Law, not can-

didates for a degree, but desiring to pursue special subjects, will be admitted on complying with the admission requirements governing candidates for degrees, or on showing by a special examination that they are qualified to pursue the subjects desired.

RULES FOR CLASS REGISTRATION

1. Students who have not obtained passing grades in subjects of either of the first two years shall be required to satisfactorily complete all back work at their earliest opportunity.

2. Any student who shall receive the mark "Fd." in any examination shall be required to take the subject in which he failed in class at the earliest opportunity.

3. Any student who shall receive the mark "Cond." in any examination shall be required to obtain at least a passing grade on that subject not later than the time of the September examinations the next year of his attendance, or in case of failure to do so shall be required to take that subject in class at his earliest opportunity.

4. Should re-registration as above required be impossible because of a necessary conflict of hours in the College of Law, or because the course will not be again offered before the student would be qualified for graduation except for such delinquency, he may remove the delinquency by examination at his earliest opportunity, without repeating the course in class.

5. No student shall be otherwise examined in subjects in which he is delinquent without vote of the Faculty, for cause shown.

6. No student required to re-register for back work under the above rules shall be permitted to register for more than thirteen hours per week, without special permission of the Faculty for cause shown.

7. These rules shall not be applicable to the courses in "Practice Court."

8. Students absent from examinations shall receive the mark "Cond."

The course of study is so arranged that the several classes have separate and distinct courses of study throughout. The elementary courses are grouped in the first year, and the specialized courses in the second and third years, the design being to cover the fundamental subjects of the law and to equip the student for the active practice of the profession.

FIRST YEAR

FIRST SEMESTER		
<i>Subject</i>	<i>Text</i>	<i>Instructor Per Week</i>
Contracts	Keener's Cases on Contracts	Dean Gregory 3 hrs
Torts	Cooley on Torts Chase's Cases on Torts	Prof. Hayes 3 hrs
Code Pleading	Iowa Code	Prof. Byers 2 hrs
The Law of Persons	Woodruff's Cases on Domestic Relations and the Law of Persons	Prof. Wilcox 2 hrs

SECOND SEMESTER

Evidence	Jones on Evidence	Prof. Byers 3 hrs
Agency	Wambaugh's Cases on Agency	Prof. Gilbert 2 hrs
Criminal Law and Procedure	McClain's Outlines of Criminal Law and Proced., or Clark's Crim. Law and Beale's Crim. Procedure	Prof. Wilcox 3 hrs
Conveyancing	Tiffany's Modern Real Property	Prof. Hayes 2 hrs
Practice Court No. 1	The Preparation of Pleadings	Prof. Byers 2 hrs

SECOND YEAR

FIRST SEMESTER

Sales	{ Williston's Cases on Sales }	Dean Gregory 2 hrs
Recording Acts, General Assign- ments, &c.	{ Practical Work }	Prof. Byers 1 hr
Bills and Notes	{ Huffcut's Cases on Negotiable In- struments }	Prof. Wilcox 2 hrs
Equity & Equity Pleading	{ Hutchins & Bunk- er's Cases in Equity Jurispru- dence, Selected Cases }	Prof. Gilbert 3 hrs
Probate Law	{ Code and Selected Cases }	Prof. Gilbert 2 hrs
Practice Court No. 2	{ Trial of Cases }	Prof. Byers

SECOND SEMESTER

Wills	{ Chaplin on Wills, Principles with Selected Cases }	Dean Gregory 2 hrs
Corporations	{ Elliott on Private Corporations (3d Ed.) Lectures on Public Cor- porations }	Prof. Wilcox 3 hrs
Partnership	{ Burdick's Cases on Partnership }	Prof. Gilbert 2 hrs
Real Property	{ Tiffany on Modern Real Property }	Prof. Hayes 3 hrs
Extraordinary Legal Remedies	{ Roberts' Cases }	Prof. Byers 2 hrs
Practice Court No. 3	{ Trial of Cases }	Prof. Byers

THIRD YEAR

FIRST SEMESTER

International Law	Scott's Cases	Dean Gregory 3 hrs
Conflict of Laws	Minor's Conflict of Law and Dyer's Cases on Private International Law	Prof. Hayes 2 hrs
Insurance	Woodruff's Cases on Insurance	Prof. Wilcox 2 hrs
Constitutional Law	McClain's Cases on Constitutional Law	Judge Towner
Suretyship	Ames' Cases	Prof. Gilbert 2 hrs
Practice Court No. 4	Trial of Cases	Prof. Byers

SECOND SEMESTER

Carriers Attachment and Garnishment	McClain's Cases	Dean Gregory 3 hrs
Common Law Pleading	Code of Iowa	Prof. Hayes 2 hrs
Justice Practice	Perry's Common Law Pleading	
Quasi Contracts	Woodruff's Cases on Quasi Contracts	Prof. Wilcox 2 hrs
Trusts	Selected Cases on Trusts	Prof. Gilbert 3 hrs
Damages	Beale's Cases on Damages	
Medical Jurisprudence	Lectures	Judge Wade

PRACTICE COURT

For the purpose of affording the student practice in the application of legal principles to statements of fact, practice courts are conducted for a portion of each year in the first and second year classes and in the first semester of the third year and each student is required to conduct or defend causes in these courts. The courts are presided over by a member of the faculty. The method and rules of procedure follow those of the trial courts, and the student is given an opportunity to draft pleadings and argue cases under these rules. This feature of instruction is an important one in the college. Students are encouraged to form club courts, and the faculty will aid such clubs in every possible way.

COMBINED LIBERAL ARTS AND LAW COURSE

For outline see page 106.

INSTRUCTION IN THE COLLEGE OF LIBERAL ARTS

Law students who desire to take work in the College of Liberal Arts in addition to their regular work in the College of Law without being candidates for a degree in the former college are allowed to take such work to an extent not exceeding five hours a week as long as they maintain a good standing in their law studies and as long as the work which they undertake in the College of Liberal Arts is done to the satisfaction of the professors in charge. This privilege is also subject to the discretion of the standing joint committee of the College of Law and the College of Liberal Arts. No additional charge is made for this instruction.

EQUIPMENT

The College of Law has the exclusive occupancy of the second floor and a part of the main floor in the Old Capitol building, and one floor of Unity Hall.

LAW LIBRARY

The library contains thirteen thousand seven hundred volumes, comprising a full series of the reports of the Supreme

Court of the United States and of the courts of last resort of forty-seven states, including all the series of reports most frequently referred to; also the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, English Ruling Cases, a collection of English Reports which (with additions lately made) is almost complete, and the English Reprint so far as published; full series of the Reporter System, and a large collection of law-text books. Students are allowed personal access to the book shelves.

The library is in charge of a regular librarian, a graduate in the law and liberal arts and a member of the bar, with four assistants, who render valuable aid to the students in the prosecution of their work.

The library room is open for the use of students from 8 a. m. to 5:30 p. m., and 7 to 9 p. m., daily.

HAMMOND HISTORICAL LAW COLLECTION

A valuable collection of twelve hundred volumes, many of them rare, relating principally to the civil law and history of the common law, was presented to the University by the widow of William G. Hammond, LL. D., the first chancellor of the College of Law, and is kept in the law library as a separate collection. These books are in special cases, under the charge of the law librarian, and are accessible on request.

The university library, containing about 65,000 volumes, is also open to students of this college, and books may be drawn from it under reasonable regulations.

THESES

Each candidate for graduation must present to the faculty, on or before the first Monday in April, a thesis upon some legal topic approved by the faculty. Such thesis must be legibly written or printed by typewriter, on paper 8½x11 inches in size, leaving a blank margin of at least one inch at side and at top and bottom. The thesis shall not be less than 1,500 nor more than 2,500 words in length, exclusive of citations of authorities. In citing cases the names of the parties as well as the volume and page of the report must be given. Each thesis must have on the first page thereof the subject of the thesis and the name of the writer.

The character of the thesis will be taken into account in determining whether the candidate is qualified to be recommended for a degree. All theses become the property of the college.

GRADUATION

Three years' study is essential to graduation, at least two of which must have been in a law school and at least the last year of which must have been spent in this college. Before being recommended for graduation the candidate must satisfy the faculty of his proficiency in all the prescribed studies of the course by passing examinations therein, or by certificates as above provided, if the candidate has pursued a portion of his studies in some other law school. Candidates must be of good moral character. Upon being recommended by the faculty, candidates may pass a final examination conducted at Iowa City by the Board of Law Examiners of the state in accordance with the statutes and rules of the Supreme Court regulating admission to the bar (see Acts Twenty-eighth General Assembly, Chapter 11, Supplement to the Code § 310), but the same is not required as a preliminary to the collegiate degree. Upon complying with the requirements above set out the candidates receive the degree of Bachelor of Laws. To students who pass the examination of the bar examiners, oaths of admission to the bar are administered in connection with their graduation, and they receive the usual diplomas and certificates of admission. Such candidates are also admitted to practice in the federal courts on graduation, the oath being administered at that time. Those who are not twenty-one years of age may pass the examination and receive their diplomas but cannot be admitted to practice until attaining that age.

Special students or those leaving the school in good standing prior to graduation are entitled to certificates showing the number of semesters spent in attendance at this college and the grades attained in the examinations passed.

FORENSIC SOCIETIES

A forensic society, The John Marshall Law Society, composed exclusively of students of this college, holds regular

weekly meetings, furnishing to its members valuable training in parliamentary law, debating and in the other exercises usually provided for by such organizations.

TUITION AND EXPENSES

For tuition and estimate of expenses see pages 72 ff.

The College of Law owns about twelve sets of the text-books above mentioned as required in the course, which it will rent in sets to students, furnishing them all the books required for any year for \$10 for the year. The rent sets do not include a law dictionary nor the Law Bulletin. As there are sometimes more calls for rent sets than can be met, those who desire to rent books should make application in advance.

THE COLLEGE OF MEDICINE

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.

PRESIDENT.

JAMES RENWICK GUTHRIE, M. A., M. D.

DEAN; Professor of Obstetrics and Gynecology.

WALTER LAWRENCE BIERRING, M. D.

VICE-DEAN; Professor of Theory and Practice, and Clinical Medicine.

PHILO JUDSON FARNSWORTH, M. A., M. D.

Professor Emeritus of Materia Medica and Diseases of Children.

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.

Professor and Head of the Department of Chemistry and Toxicology.

JAMES WILLIAM DALBEY, B. S., M. D.

Professor Emeritus of Ophthalmology.

CHARLES SUMNER CHASE, B. S., M. A., M. D.

Professor of Materia Medica and Therapeutics.

FRANK THOMAS BREENE D. D. S.

Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinic.

WILLIAM ROBERT WHITEIS, M. S., M. D.

Professor of Obstetrics.

LEE WALLACE DEAN, M. S., M. D.

Professor of Ophthalmology, Otology, Rhinology, and Larynology, and Director of the University Hospital.

WILBER JOHN TRETERS, M. S., PH. C.

Professor of Pharmacognosy, Director of the Pharmaceutical Laboratory, and Dean of the College of Pharmacy.

WILLIAM JEPSON, B. S., M. D., L. R. C. P. and S.

Professor of Surgery.

JOHN THOMAS MCCLINTOCK, B. A., M. D.

Professor of Physiology.

HENRY ALBERT, M. S., M. D.

Professor of Pathology and Bacteriology.

HENRY JAMES PRENTISS, M. E., M. D.

Professor of Anatomy, and Director of the Histological Laboratory.

ALBERTUS JOSEPH BURGE, M. S., M. D.

Assistant Professor of Surgery.

CLARENCE VAN EPPS, B. S., M. D.

Assistant Professor of Theory and Practice.

JOHN BLAIB KESSLER, M. D.

Lecturer and Clinical Instructor in Dermatology.

***JENNINGS PRICE CRAWFORD, M. D.**

Lecturer on Surgical Technique.

CHARLES SCHAFER GRANT, M. D.

Lecturer on Paediatrics.

SELSKAR MICHAEL GUNN, B. S.

Lecturer on Hygiene.

MARTIN JOSEPH WADE, LL. B.

Lecturer on Law.

MAX ERNEST WITTE, M. D.

Lecturer on Nervous Diseases.

FRANK HARVEY CUTLER, B. S., M. D.

Lecturer on Electro-Therapeutics.

ZADA MARY COOPER, PH. G.

Instructor in Pharmacy.

ANFIN EGDAHL, B. S., M. D.

Instructor in Pathology and Bacteriology.

FREDERICK POMEROY LORD, A. B., M. D.

Demonstrator of Anatomy, and Assistant in Surgery.

WALTER HENRY FOX, M. D.

Demonstrator in Anatomy, Histology, and Embryology.

FREDERICK WILLIAM BAILEY, M. S., M. D.

Instructor in Ophthalmology, Otology, Rhinology, and Laryngology.

JOHN JOSEPH LAMBERT, M. S.

Instructor in Histology and Embryology.

*Died March 24, 1907.

CHARLES DELOS POORE, A. C.

Instructor in Chemistry.

RUDOLPH ERNST KLEINSORGE, B. S.

Assistant Instructor in Physiology.

ROE EUGENE REMINGTON, B. A.

Assistant Instructor in Chemistry.

ARTHUR DANIEL WOODS, M. D.

Assistant Demonstrator in Anatomy, Histology, and Embryology.

HELEN BALCOM, Graduate Nurse.

Superintendent of University Hospital, and Principal of Nurses' Training School.

WILLIAM FRED BOILER, M. D.

Resident Physician, University Hospital.

JOSEPH MAXWELL CADWALLADER.

Senior Undergraduate Demonstrator in Anatomy, Histology, and Embryology.

ARCHIE WEST CRABY, B. S., LL. B., M. D.

Clinical Assistant in Ophthalmology, Otology, Rhinology, and Laryngology.

IRA NELSON CROW.

Assistant in Histology and Embryology.

WILLIAM McMICKEN HANCHETT, A. B.

Assistant in Pathology and Bacteriology.

MARY KATRINA HEARD, Ph. C., B. Ph., M. D.

Fellow in Ophthalmology and Otology.

HARRY MORGAN IVINS, B. S.

Scholar in Animal Biology.

CHARLES SCHUTZ KRAUSE, M. S., M. D.

Assistant in Gynecology.

ISAAC WELLMAN LEIGHTON.

Undergraduate Assistant in Histology and Embryology.

JAMES CHARLES MCGREGOR, M. D.

Assistant Demonstrator in Pharmacology.

WILLIAM GEORGE MCKAY, M. S.

Assistant in Pathology and Bacteriology.

DIEDRICH JANSSEN MEENTS, B. S.

Senior Assistant in Pathology and Bacteriology.

WILLIAM JOHN MORGAN, B. S.

Storekeeper in Chemistry.

JOHN THOMAS PADGHAM.

Undergraduate Assistant in Physiology.

ANNA MARIE SLATER.

Matron of the University Hospital.

FREDERICK ALBERT SLYFIELD.

Attendant in Pathology and Bacteriology.

EDGAR FRANCIS SMITH.

Junior Undergraduate Demonstrator of Anatomy, Histology, and Embryology.

FREDERICK WILLIAM VALKENAAR.

Senior Assistant in Clinical Microscopy.

EVERETT CHAPMAN WARD.

Undergraduate Assistant in Histology and Embryology.

NELSON DREW WELLS, B. PH.

Tutor in Medical Latin.

PERRY WESSEL, M. D.

Resident Physician, University Hospital.

THE COLLEGE OF MEDICINE

ORGANIZATION

The College of Medicine, or the Medical Department as it was called in the beginning, was organized in 1869 but the first session did not open until October 11th, 1870. During the first thirteen years nearly all of the work was carried on in the basement of Old South Hall. In 1883 the department entered the four story medical building, considered at the time to be a model of its kind. This structure with its valuable museum was destroyed by the disastrous fire of March 10, 1901, after which the present laboratory buildings were erected.

The Mechanics Academy, noted as the first institution for higher education in Iowa, whose corner stone, bearing the date of 1842, now forms a part of the foundation of the University Hospital, became the first hospital (Old Mercy) of the medical department. In 1886 the new Mercy Hospital was established, and during the session of 1897-1898 the present University Hospital was opened.

A comparison of the first course of study of two years of twenty weeks each, with the present four years of thirty-six weeks, taken in connection with the marked change in entrance requirements, is an indication of the growth of the college.

The instruction of the college is carried on through lectures, clinics, demonstrations, and experimentation according to the needs of individual departments and courses.

The course of study extends through four years of thirty-six weeks each. The session is divided into two semesters of eighteen weeks, and the semester into two quarters of nine weeks each.

BUILDINGS

The buildings of the College of Medicine are situated upon the new Medical Quadrangle, which affords space for the growth of the department and the systematic architectural arrangement of structures erected.

The HALL OF ANATOMY is an hexagonal, fire-proof building of Bedford stone, with granite foundations. The interior finish is designed to be aseptic. The building contains dissecting rooms with accommodations for twenty tables, an amphitheater with seating capacity of two hundred and twenty-five persons, offices, reading rooms, anatomical museum, and preserving room.

THE GENERAL MEDICAL LABORATORIES are in the second building of the quadrangle. The first floor is occupied by the department of physiology; the second, by the department of histology and embryology; the third, by the laboratories of pathology and bacteriology, the pathological museum, and the clinical laboratory. This building also contains two large amphitheaters, laboratories for special research, recitation rooms, faculty room, library, and waiting rooms.

Both of these buildings are new and equipped with modern appliances for both elementary and advanced work.

UNIVERSITY HOSPITAL

The University Hospital was erected by the University in 1897 at a cost of \$55,000, and \$10,000 have been expended recently in remodeling and equipping it after the most modern ideas. At present a new fire-proof wing is being added, which will cost, when equipped, \$75,000. This will give the hospital the capacity of one hundred and thirty-five beds.

The completed building will be ready for occupancy at the opening of the coming session. The full equipment will comprise a thoroughly furnished administration building, large and commodious wards as well as private rooms, a clinical amphitheater with a seating capacity of more than two hundred, separate surgical, gynecological, medical, ophthalmological, and laryngological operating rooms, together with a well supplied Free Dispensary, open throughout the year.

CLINICS

The large number of clinical cases treated at the University hospital furnishes an abundance of cases of almost every character. Each case is fully utilized as a means of instruction. Members of the senior class, under the direction of the instructors in charge, make a careful study of each case before operation. Each member of the senior class is required to examine and report upon a number of cases each week in addition to observing all others. The students of the senior class are divided into ward-classes, of six or eight students each, and accompany the attending physicians in their rounds, being given opportunity to study the treatments given, to observe the progress of each case, and to note the dressings used.

CLINICAL PATIENTS

Cases presented for clinics should be referred as follows: medical, to Professor Bierring; surgical, to Professor Jepson; gynecological, to Professor Guthrie; obstetrical, to Professor Whiteis; ophthalmological, otological, rhinological, and laryngological, to Professor Dean; dermatological, to Dr. Kessler.

RESIDENT PHYSICIANS

Appointments as resident physicians in state and other institutions are made each year from the graduates of the College of Medicine. These are awarded to such of the applicants as the faculty judges best prepared for the positions, the successful candidates being allowed, in the order of their rank, to select the hospital which they wish to serve.

Two resident physicians are appointed for the University Hospital. For the present year the appointments are: Dr. William Fred Boiler, and Dr. Perry H. Wessel, for the University Hospital; Dr. Frank Xavier Cretxmeyer, for Mercy Hospital, Davenport.

PATHOLOGICAL MUSEUM

The museum contains a valuable and varied collection of

preparations, preserved in natural colors and adapted for illustration of the different pathological conditions. The specimens are secured principally from the University clinics and autopsies, by personal visits to the pathological institutes of the large European centers, and by contribution from professional friends. Physicians are earnestly requested to send to the curator of the museum any specimens of pathological anatomy. For all such favors credit will be given by labeling the preparations with the name of the donor before placing them in the museum.

TUITION

For tuition, etc., see pages 72 ff.

ADMISSION, STANDING, AND DEGREES

REQUIREMENTS FOR ADMISSION

1. Each applicant for admission must present to the secretary of the faculty a satisfactory certificate of good moral character, signed by two physicians of good standing in the state from which he comes.

2. The following classes of applicants may be admitted without examination.

a. Graduates or matriculates of reputable universities or colleges who present diplomas or certificates of honorable dismissal from such universities or colleges, together with a special certificate that they have studied Latin at least one year.

b. Graduates of normal schools established by state authority who present diplomas or certificates of graduation, together with a special certificate that they have studied Latin at least one year.

c. Graduates of accredited secondary schools who present thirty preparatory-credits,* including at least one year of Latin. These preparatory credits must be properly certified by the superintendent or the principal of the school from which the applicant comes, on a blank form which can be obtained by addressing the president of the University, or the University examiner. This certificate should be sent to the University examiner *as early in the summer as possible*.

3. Applicants who present twenty-eight preparatory-credits properly certified (as indicated under 2 c) may be admitted without examination, *on condition that they complete their preparation within one year from the date of their admission*.

*In estimating the amount of work required for admission, a *preparatory credit* is regarded as the equivalent of one study daily for a semester of eighteen weeks on the basis of four studies a day; thus eight credits stand for a normal year's work.

No applicant whose deficiencies exceed two preparatory credits will be admitted as a candidate for graduation.

4. In September, 1907, applicants who do not present credentials as described above will be admitted without conditions *only upon passing examinations* in the preparatory subjects named in the program of entrance examinations given below. Any applicant may offer himself for entrance examinations in other preparatory subjects than those named in the program if, in the judgment of the University examiner, these are real equivalents of those named in the program, Latin only being excepted.

5. The applicant who passes examinations in all of the subjects enumerated under 4, except such as stand for a total of two preparatory credits, may be admitted *on the condition stated in 3.*

6. Applicants who present proper *certificates* covering all or any part of the preparatory studies designated under 4 for examination, may be admitted upon passing examinations in enough *other* preparatory studies to bring the number of their preparatory credits up to at least *twenty-eight*, *on the condition stated in 3.*

7. All applicants who are admitted without Latin will be required to take the one-year course in medical Latin specially provided by the University, the fee being \$5.00 for the course. This course is not a part of the regular course in medicine, but is offered as a convenience for such applicants for admission as have not studied Latin. The class in this course will be organized on Monday, September 30, 1907. Students who take this course are required to pay the fee at the time when they pay the first installment of their regular tuition fee.

8. Students who enter with conditions in other preparatory studies than Latin must pass the regular entrance examinations in these studies either in February or in September, 1908.

9. Students entering from other colleges of medicine with advanced standing must present credentials for preparatory work or be examined as stated above.

10. Any one who expects to enter the College of Medicine

in September is urged to send all certificates of preparatory work to the University examiner *as early in the summer as possible, and certainly before September 1*. If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the Secretary of the Board of Regents, room 101, Old Capitol.

PROGRAM OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Wednesday, September 18 to Saturday, September 21, 1907

Latin,	2 credits,	Thursday,	10:00 A. M.
English and			
English Grammar,	2 credits,	Thursday,	1:30 P. M.
Literature,	2 credits,	Thursday,	3:00 P. M.
General History,	2 credits,	Thursday,	4:30 P. M.
English History	1 credit,	Friday,	8:00 A. M.
U. S. History,	1 credit,	Friday,	9:00 A. M.
Civil Government,	1 credit,	Friday,	10:00 A. M.
Algebra, through			
Quadratics,	3 credits,	Friday,	1:30 P. M.
Plane Geometry,	2 credits,	Friday,	3:30 P. M.
Physics,	2 credits,	Saturday,	8:00 A. M.
Botany,	1 credit,	Saturday,	9:30 A. M.

SECOND SEMESTER

The examinations will be held between Thursday, February 6 and Saturday, February 8, 1908, according to a program which will be posted by the University examiner before the close of the first semester.

For *each separate* examination given at any other time than that announced in the following programs, a fee of *one dollar* will be charged by the University. For a *series of* examinations covering two or more subjects a fee of *two dollars* will be charged.

Any person expecting to enter the College of Medicine in

September, should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the University examiner.

Each applicant who is to be examined must arrive in the city early enough to be present *at his first examination as indicated in the programs given*. He should present himself at once at the office of the University examiner, who will give him all necessary directions.

INCREASED REQUIREMENTS FOR ADMISSION ON AND AFTER JANUARY 1, 1910

In accordance with the recommendation of the American Medical Association and the National Confederation of State Licensing and Examining Boards, the minimum requirements for admission after January 1, 1910, will be four years of high school work and one year's work in college, including one year each of physics, chemistry, biology, and a foreign language.

ADMISSION TO ADVANCED STANDING

All students who enter from other schools with advanced standing must comply with the requirements for admission.

Students from other accredited medical colleges who have attended one course of lectures will be admitted to the sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the senior class upon passing an examination in the branches taught during the first, second, and third years. At least thirty-four weeks of study must have been included in each annual course.

In accordance with the action taken by the board of re-

gents, March 10, 1905, four years of residence are required in the College of Medicine; so that advanced standing will not be granted to graduates from literary and scientific colleges. This action is in conformity with the requirements of the Iowa, Minnesota, and other state boards of medical examiners..

UNCLASSIFIED STUDENTS

Applicants for admission to the College of Medicine, not candidates for a degree, but desiring to register for special subjects, will be admitted to any course of lectures or laboratory practice only upon complying with all of the regular requirements for admission to such course; or upon satisfying the professor in charge of the course that they possess the qualifications to pursue this course.

EXAMINATIONS FOR REMOVAL OF DEFICIENCIES

In case of deficiency in any subject the student must be examined in that subject before registration at the opening of the next session in September; but if he *fail* in *more than two* subjects he will not be admitted to the September examination. If he *fail* in any subject in the September examination he will be allowed to present himself for re-examination only after attendance upon another course of lectures in that subject; or only after having prepared himself for such re-examination under a tutor approved by the University. A *failure* in more than two subjects at the September examination will debar the student from admission to a higher class.

The standing gained in each September examination is to be recorded as the standing for the entire year's work in each subject in which such examination is given.

A student who *fails* in *only one* subject in the September examination will be conditioned in that subject and allowed to take the next year's work; but he must remove the condition by the end of that year.

All students having deficiencies in the medical work will appear for examination according to the following schedule:

FRIDAY, SEPTEMBER 20

Surgery,
Medicine,
Obstetrics,
Gynecology,

8:00 A. M.
9:00 A. M.
10:00 A. M.
11:00 A. M.

SATURDAY, SEPTEMBER 21

Histology,
Physiology,
Pathology,
Anatomy,
Materia medica,
Chemistry,

8:00 A. M.
9:00 A. M.
10:00 A. M.
11:00 A. M.
3:00 P. M.
4:00 P. M.

DEGREE OF DOCTOR OF MEDICINE.

1. The candidate must be twenty-one years of age.
2. He must be known to be of good moral character.
3. His time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures, shall not be less than thirty-four weeks, and no two of the four courses shall be within the same year.
4. His deportment during the time must have been satisfactory to the professors and instructors of each department.
5. His attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the college.
6. He must have passed a satisfactory examination in each of the branches of study of the curriculum.
7. Students of the senior class who are candidates for the degree of Doctor of Medicine must, before May first, present to the Registrar certificates of legal age.
8. Class standing and recitation marks, together with demonstrators' reports and final examinations, will be taken into consideration in the determination of the candidate's fitness to receive the degree of Doctor of Medicine.

DEGREE OF MASTER OF SCIENCE IN MEDICINE

Students who, upon admission to the University, have presented preparatory work equivalent to the full requirement of the College of Liberal Arts, and who have completed the four

years' course in medicine, may, upon the recommendation of the faculty of the College of Medicine, be admitted to the Graduate College as candidates for the degree of Master of Science in Medicine. Such students will be expected to select their major and minor subjects under the advice of the medical faculty. The terms upon which the degree will be granted are the same as those pertaining to the master's degree in general as outlined in the Announcement of the Graduate College.

COMBINED COURSES

Arrangements have been made with the faculty of the College of Liberal Arts for a student to receive credit in one college for work done in another, obtaining the two degrees in six instead of eight years, which would be required if each degree were taken independently. These combined courses are especially recommended to all students who intend to enter the profession of medicine.

REQUIREMENTS FOR ADMISSION TO COMBINED COURSES

1. Some <i>one</i> foreign language,*	4 credits
2. English and literature,	6 credits
3. History, (may include civics),	2 credits
4. Algebra, through quadratics, theory of exponents, and progressions,	3 credits
5. Plane geometry,	2 credits
6. Electives (<i>additional</i> accreditable work in foreign language, Eng- lish, history, mathematics, or science),	13 credits
	<hr/>
Total,	30 credits

For outline of the combined course leading to the degree of B. S. and M. D. see page 106 107.

*Latin is preferred, but German and French are accepted. Students who are admitted without Latin must take the one-year course of medical Latin in the University.

COURSES OF INSTRUCTION

ANATOMY

PROFESSOR PRENTISS; DR. LORD, DR. FOX, DR. WOODS, MR. CADWALLADER, MR. SMITH

Freshman Work—The class for purposes of anatomical study is divided into three sections to accommodate it to the natural divisions of the body, i. e., head and neck, arm and thorax, leg and abdomen.

Section I on entrance is assigned to the study of the bones of the skull and the cervical vertebrae. It receives four demonstrations each week for five weeks, followed by an examination. The head of the department quizzes this section one hour a week on the subject matter covered, using anatomical material on which the student demonstrates his knowledge.

Upon completing the study of skull and vertebrae, four weeks are spent in dissecting the main structures of the head and neck. An examination on the practical work is held at the end of that period. The head of the department conducts a quiz one hour a week upon a dissected specimen, requiring each student to demonstrate his knowledge from the cadaver. The section again meets with a demonstrator for five weeks in the consideration of the osteology and joints of the arm and thorax. The section then spends four weeks dissecting the soft parts of this third of the body.

In the last third of the year the work treats of the bones and joints of the leg and abdomen, and then follows the dissection of this portion of the body. Quizzes are conducted in

the same manner as mentioned in the consideration of the head and neck.

Lectures—During the first semester the instructor considers the visceral anatomy in a general way and from the developmental point of view, as follows:

- I. Digestive tract;
- II. Diverticula of digestive tract; liver, salivary glands, pancreas;
- III. Respiratory tract; larynx, trachea, bronchi, lungs;
- IV. Ductless glands;
- V. Genito-urinary tract;
- VI. Angiology; heart and its main vessels, arteries and veins.

During the second semester the brain and spinal cord are considered in a general way. The lectures then treat in detail of the nerve-plexuses and major joints. The year's course of lectures is terminated with a general consideration of the skeleton as a whole—bone composition, etc. The year's course is followed by two examinations. One is a practical examination on the bones of the entire body, the joints, and the muscular, arterial, and nervous systems. The second is a written examination to test the theoretical knowledge of the student.

Section II begins with the bones of the arm and thorax, then studies the leg and abdomen, and lastly the head and neck. Otherwise the work is as outlined for Section I.

Section III begins with the bones of the leg and abdomen, then studies the head and neck, and lastly, the arm and thorax.

Sophomore Work—The sophomore class is also divided into three sections. Before dissecting, the instructor meets each section three times a week for a period of four weeks and demonstrates the viscera of the part assigned, giving special attention to the perineum, inguinal and femoral canal, and both male and female genitalia. A practical examination is held at the end of the period. Five weeks is then spent dissecting in great detail the part assigned, including the viscera upon which demonstrations have just been given. As with the freshman class there is a period of demonstrations followed by

dissections, the demonstrations being now visceral instead of osteological.

Lectures—Two lectures a week are given during the year to the sophomore class. The course begins with the consideration of thoracic viscera, including general anatomy and regional anatomy and the application to medicine and surgery. The abdominal viscera are studied next, beginning with the digestive tract and finishing with the genito-urinary system. A series of lectures is devoted to the peritoneum considering it from the developmental and comparative point of view, illustrating by models, lower forms of animal life, and finally with the human body. The spinal cord and brain, including the membranes, are next considered. The three sections have already considered, in the demonstration periods, the gross anatomy of the brain. Cranial nerves are now considered from their origin to their distribution. The study of the sympathetic system follows. Finally the vascular system is treated, stress being laid upon relations, surgical importance, surface markings, etc. The study of the venous and lymphatic systems terminates the course. The head of the department demonstrates to the class in two sections each week on the lectures, following this with two quizzes each week on the lectures and demonstrations. Practical and written examinations for advanced standing are required at the end of the course.

Junior Class—At the opening of the second semester a course in applied anatomy begins. The scalp, regional anatomy referring to the brain, face and neck, thorax and abdomen, are considered in the order mentioned. Surgical spaces are considered separately, followed by surgical anatomy of the arteries. The major joints are discussed, stress being laid upon their relations to the coverings. Great attention is paid to inguinal, femoral, and perineal anatomy.

Senior Class—An optional course is offered in special regional anatomy. The course relates especially to the surgical anatomy of the ear, nose and throat, and the eye. Other special anatomy will be taught if desired.

NOTE: An anatomical museum, or anatomical study-room is being developed, containing prepared specimens of every sort. Specially prepared boxes are provided to hold the bones

of the head, arm and thorax, and leg and pelvis. These boxes are issued to students according to the part of the body that they are studying. The dissection room is provided with a mounted skeleton for reference during the dissection periods. A case in the dissecting room contains carefully prepared specimens of all the major joints. These specimens are kept pliable by a special fluid.

As a result of much experimentation, a method has been found for keeping the material for dissection pliable and ready for instant use without the use of cold storage and without deleterious fumes.

PHYSIOLOGY

PROFESSOR MCCLINTOCK; MR. KLEINSORGE, MR. PADGHAM

The work for the medical student in physiology is graded in the first two years of the medical course, and is so arranged by combining laboratory work with lectures and recitations as to be of the most practical value to students of medicine. The purpose of the lectures, which are illustrated, is to emphasize the essential facts and such accepted theories as may be necessary to explain the physiology of the human organism and, so far as possible, to show how the normal functions may be changed in pathological conditions.

The laboratory work is arranged so that personal observation and practical application can be made by each student of the facts and theories which have been emphasized in the lectures. All the necessary apparatus is provided and sufficient time is spent in both the first and second years to study by laboratory observation all that is covered in the lecture work of each year.

Although during the entire course the subject of pathological physiology is treated along with the normal, in the third year a short course is given in which an especial effort is made to emphasize the close association between the normal and abnormal functional activity of the organs of the human body, and the application of the laws of physiology to pathological conditions.

1a. ELEMENTARY PHYSIOLOGY.*3 hrs.**

Lectures, recitations, and demonstrations dealing with the physiology of the plant and animal cell, the fundamental properties of protoplasm, and the "body ingredients." Freshman work. Professor McCLINTOCK.

1b. CIRCULATORY SYSTEM; RESPIRATORY SYSTEM.**3 hrs.**

This course includes the lectures, recitations and demonstrations upon the blood, its circulation, upon respiratory system and upon the lymph and lymphatic system. Freshman work. Professor McCLINTOCK.

2a. DIGESTION AND METABOLISM.**3 hrs.**

This course includes lectures and recitations upon the subjects of ferments and their action, especially the digestive ferments, the chemistry and mechanics of digestion, the absorption of food-stuffs and upon anabolism and katabolism of cells and of the body. Freshman work. Professor McCLINTOCK.

2b. SECRETION AND EXCRETION.**3 hrs.**

Lectures and recitations dealing with both the internal and external secretions, the changes in the secretory gland cells, the nervous mechanism and blood supply of the glands. The course also includes the physiology of the kidney and the skin, the urine and sweat, and their origin and excretory substances. Freshman work. Professor McCLINTOCK.

3a. MUSCLE AND NERVE.**3 hrs.**

A study of the activity of muscular and nervous tissue under normal and abnormal conditions; a study of various forms of stimuli and their effect upon tissue, dealing especially with electrical stimuli and the physiological basis of electro-therapy. Lectures, recitations and demonstrations. Sophomore work. Professor McCLINTOCK.

3b. THE NERVOUS SYSTEM.**3 hrs.**

Lectures and recitations upon the brain, spinal cord, cranial and spinal nerves, and sympathetic system. Special attention is given to cerebral localization and spinal pathways, reflexes, and the location of possible lesions in the more common nervous diseases. Sophomore work. Professor McCLINTOCK.

*See note at bottom of page 111.

4a. PHYSIOLOGY OF SENSATION. 3 hrs.

All the senses are studied during this course of lectures and recitations. Sophomore work. Professor McCLINTOCK.

4b. PHYSIOLOGY OF REPRODUCTION. 3 hrs.

Lectures and recitations. Sophomore work. Professor McCLINTOCK.

5. FIRST-YEAR EXPERIMENTAL PHYSIOLOGY.

This is a laboratory course for the students of the first year and is designed to cover in a practical way all of the subjects treated of in the first year didactic work, except the chemistry of digestion, which is taken in the department of chemistry. Professor McCLINTOCK; Mr. KLEINSORGE; Mr. PADGHAM.

7. SECOND-YEAR EXPERIMENTAL PHYSIOLOGY.

A laboratory course of about sixty hours upon muscle and nerve physiology and upon the sensations, physiological optic. For this work the class is divided into small sections and each individual is given personal attention by those in charge. Professor McCLINTOCK; Mr. KLEINSORGE; Mr. PADGHAM.

8. PATHOLOGICAL PHYSIOLOGY—Elective. 1 hr.

A course of lectures and recitations especially covering the physiology of the diseases of the digestive system, blood, circulation, excretion and the nervous system. Optional laboratory work is given with this course, time to be arranged. Junior work. Professor McCLINTOCK; Mr. KLEINSORGE.

9 (10). ADVANCED PRACTICAL PHYSIOLOGY—Elective.

This course is open to those who have completed courses 1a to 8, inclusive. A special subject is assigned to each student for research work. He is supplied with animals and all needed apparatus for such work as may be selected. Where possible the work may be followed up by direct observations upon patients in the University hospital. Time to be arranged in the senior year. Professor McCLINTOCK; Mr. KLEINSORGE.

CHEMISTRY AND TOXICOLOGY

PROFESSOR ROCKWOOD; MR. POORE; MR. REMINGTON

The work of the department is conducted in the chemical

building of the University. The outfit is ample for demonstrating the general principles of chemistry as well as its application to medicine. Each student is supplied with a set of the necessary apparatus, being obliged to pay only for that which is injured or destroyed.

The course in chemistry is designed to give the student a thorough knowledge of fundamental principles, and to assist him in applying these to the problems which he will meet in the practice of his profession. The lectures are fully illustrated by experiments.

***9. CHEMISTRY OF THE NON-METALLIC ELEMENTS. 3 hrs.**

Lectures and recitations. Freshman year. Three hours each week. Mr. POORE.

10a. CHEMISTRY OF THE METALS AND THEIR COMPOUNDS. 3 hrs.

Lectures and recitations. Freshman year. Mr. POORE.

10b. ORGANIC CHEMISTRY. 3 hrs.

Lectures and recitations. Freshman year. Mr. POORE.

107 (108a.) QUALITATIVE ANALYSIS. 3 hrs.

A laboratory course. It includes, first, the methods of testing for the metallic poisons; then a study of the common medicinal compounds. The student learns the methods of chemical manipulation and the use of apparatus, and also becomes acquainted with the action of reagents and of the common chemicals upon each other. The course includes the chemical examination of water from a sanitary standpoint, each student making analyses of various wholesome and polluted waters. First year. Mr. POORE; Mr. REMINGTON.

108b. VOLUMETRIC ANALYSIS. 3 hrs.

A laboratory course. Volumetric methods of quantitative analysis are especially adapted to the needs of the physician because of the rapidity and ease with which they can be executed. The principal methods are taught and the student is given enough practice to familiarize him with them. Freshman year. Mr. POORE; Mr. REMINGTON.

227 (228). PHYSIOLOGICAL CHEMISTRY. 2 hrs.

Lectures and recitations. The lectures are in explanation and amplification of the laboratory work. They include the

*See note at bottom of page 111.

study of the proximate principles of the body and their chemical changes, also foods and digestion, blood, milk, urine, fermentation, and bacterial products. Sophomore year. Professor ROCKWOOD.

229. GENERAL PHYSIOLOGICAL CHEMISTRY. 1 hr.

A laboratory course. The proximate principles of the body and food materials are prepared by the student and their properties and chemical changes are studied. Experiments in artificial digestion are made, their products being isolated and examined. The constituents of the blood are tested chemically and spectroscopically. Sophomore year. Professor ROCKWOOD; Mr. POORE.

230. APPLIED PHYSIOLOGICAL CHEMISTRY. 1 hr.

A laboratory course. The modern methods of physiological chemistry are used in solving problems which arise in the practice of medicine. These include such topics as the analysis of the gastric juice, quantitative tests being made where they are valuable for diagnostic purposes, the qualitative tests for the abnormal constituents of the urine, with the quantitative determination of such as are of importance, the identification of urinary sediments, of calculi, and of blood stains. Each student makes a complete examination of a large number of each of these, handing in written reports for correction and suggestions. Sophomore year. Professor ROCKWOOD, Mr. POORE.

231 (232). ADVANCED PHYSIOLOGICAL CHEMISTRY. 5 hrs.

This is planned for those who wish to continue the work of the preceding courses. The methods used in research for the isolation and quantitative determination of some of the body constituents are studied in the laboratory. The course may be taken as a minor for an advanced degree. Prerequisites, courses in inorganic and organic chemistry, with courses 227 (228), 229, and 230.

241 (242a). TOXICOLOGY. 1 hr.

Lectures and recitations. The physiological and chemical action of the principal poisons is considered as well as their antidotes. The methods of identifying poisons in food, excreta, etc., are explained and illustrated by experiments. Junior year. Professor ROCKWOOD.

125, 126. TOXICOLOGY.

3 hrs

An elective laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating them from foods, clothing, and various complex mixtures. The post-mortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, general chemistry and qualitative analysis. First or second semester. Professor ROCKWOOD.

142. CHEMISTRY AS APPLIED TO SANITARY SCIENCE.

3 hrs

An elective laboratory course. Included in this are the methods suitable for the physician in testing the purity of water, air, milk, and other food materials, together with the means of detecting preservatives, adulterants, and substitutes. The student works independently according as the course is outlined by the head of the department. Junior year. Professor ROCKWOOD.

251. PHYSICAL CHEMISTRY.

2 hrs

An elective course; lectures twice a week. Assistant Professor VON ENDE.

253 (254). PHYSICAL CHEMISTRY.

1 or 2 hrs

An elective laboratory course. Assistant Professor VON ENDE.

291 (292). GRADUATE WORK.

Suitable courses will be outlined to meet the requirements of the individual graduate student desiring to carry on advanced work either as a major or as a minor in a course leading to an advanced degree in the Graduate College of the University. The applicant for such a course must satisfy the head of the department as to his knowledge of general chemistry and as to his fitness for undertaking original investigations. The work will be under direct supervision of the professor in charge of the department. Time to be arranged. Professor ROCKWOOD.

HISTOLOGY AND EMBRYOLOGY

PROFESSOR PRENTISS; DR. FOX, DR. WOODS, MR. LAMBERT,
MR. CROW, MR. LEIGHTON, MR. WARD

The department of histology and embryology occupies the

entire second floor of the newly completed medical laboratory building. This building has been designed with special reference to the requirements of microscopical work. North and east exposures, ample room, and unobstructed light give ideal conditions for this line of study. The laboratories of this department consist of two large rooms for general class work, a special laboratory equipped for research work, a preparation room containing a complete stock of reagents, human tissues, and tissues of lower animals, appliances such as microtomes for brain sections, paraffin, and celloidin work, paraffin bath, and electric motors with apparatus for preparing sections of teeth, bone, etc.

In connection with the laboratories are rooms devoted to a library, containing the latest books and journals pertaining to histology and embryology, a museum containing specimens preserved in alcohol, and several thousand microscopic slides of stained and injected adult and embryonic tissues.

Classes are divided into small sections and a sufficient number of demonstrators are present so that each student may have individual attention.

The illustrative material consists of charts, diagrams, models, and blackboard-drawings. Each student prepares for himself a complete series of 150 permanent specimens, illustrating the microscopic anatomy of the human body.

Each student is provided with a compound microscope and individual locker.

The lecture room is immediately adjacent to the laboratories. It has a seating capacity of 250 and is provided with a Zeiss epidiascope,* charts, and other appliances necessary for illustrated lectures.

The work in histology and embryology is under the direction of the professor of anatomy and is taken up in conjunction with the course in gross anatomy. The study of the subject continues through the first and second years.

†1 (2). ELEMENTARY HISTOLOGY. 4 hrs.

During the freshman year the histology of the animal

*This instrument is used for projection on a screen images not only of microscopic-slides, lantern-slides, and the like, but also of opaque objects, such as charts, atlases, illustrations, and specimens.

†See note at bottom of page 111.

tissues exclusive of the central nervous system and the special senses is covered. This will include the study of the general tissues including the digestive tract and adnexa; the genito-urinary tract, the vascular system, the peripheral nervous system, etc. Each laboratory period is preceded by lectures in the anatomical department illustrating the gross appearances and their relations to the microscopic findings. Two such lectures a week are given by Professor Prentiss. One lecture a week on the specialized histological features is given by Dr. Fox just before the laboratory periods. Two quizzes a week. Freshman work. Dr. Fox; Mr. LAMBERT.

A short course in histological technique is to be given the freshman class, including the fixing, hardening, mounting in celloidin and paraffin, sectioning, staining, etc.

3 (4). HISTOLOGY AND EMBRYOLOGY.

4 hrs

The year's work begins with the study of the special senses—skin, internal ear, eye, etc. This is followed by a series of embryological demonstrations. Beginning with the cell, emphasis is laid upon the development of the germ layers, body cavities, placental membranes, vascular system, genito-urinary tract, alimentary canal and the cerebro-spinal axis. The class is then ready to study the histology of the cerebro-spinal axis in the last quarter having by that time also received demonstrations in the anatomical laboratories on the gross structures of the brain and cord. Laboratory and demonstration work. Sophomore work. Professor PRENTISS.

5 (6). ADVANCED WORK FOR DEGREE IN GRADUATE COLLEGE

As a prerequisite to advanced work the student will be required to possess a good working knowledge of both the methods and the subject matter of general histology and embryology. He will be assigned a private laboratory and offered such opportunities as the general laboratory and library afford. The department will supply the necessary materials in the way of tissues and reagents.

Two courses are offered as follows:

a. THE EYE.

The histology of its tissues, considered in relation to both their phylogenetic and their ontogenetic development. The structure and development of the retina is specially studied.

b. THE EAR.

The investigation will proceed along the same lines as in the preceding course.

MATERIA MEDICA AND THERAPEUTICS

PROFESSOR CHASE; PROFESSOR TEETERS, DR. MCGREGOR, DR. CUTLER, MR. GUNN, MISS COOPER, MR. WELLS

***1. ORGANIC MATERIA MEDICA. 3 hrs.**

The course is introduced by definitions and a discussion of routes and modes of administering drugs, dosage, classification of official preparations, and prescription-writing. Following such general topics organic drugs are taken up in a natural order of grouping. Sophomore year. Two lectures and one recitation each week. Professor CHASE.

2. ORGANIC AND INORGANIC MATERIA MEDICA. 3 hrs.

Drugs of both vegetable and animal as well as inorganic origin are considered. As before they will be grouped with reference to some dominant or characteristic action. Thus are grouped drugs affecting the nervous system, the heart, the circulatory system, respiration, etc. Toward the close of the year a general review is given. Sophomore year. Two lectures and one recitation each week. Professor CHASE.

3a. THERAPEUTICS. 3 hrs.

General therapeutics is presented at the outset by means of such subjects as pneumotherapy, hydrotherapy, balneotherapy, climato-therapy, psychotherapy, hypnotism, suggestion, heat and cold, and other general therapeutic measures more or less mechanical. Junior year. Two lectures and one recitation each week. Professor CHASE.

3b. THERAPEUTICS. 3 hrs.

Following the preceding course drugs of a general nature or such as affect the tissues of the body generally, and drugs which affect particular organized systems, are presented separately; for example, those used to stimulate or depress the heart, to modify nutrition, or those which act upon the nervous system. Junior year. Two lectures and one recitation each week. Professor CHASE.

*See note at bottom of page 111.

4. THERAPEUTICS.**3 hrs.**

The preceding course is followed by a discussion of local remedies, that is, remedies acting upon mucus membranes to stimulate their functional activity. Prescription-writing will be given careful attention throughout the year, the aim being to illustrate each drug with one or more practical prescriptions and to discuss briefly its mode of administration. Junior year. Two lectures and one recitation each week. Professor CHASE.

5 (6). EXPERIMENTAL PHARMACOLOGY.

During both semesters of the third year an elaborate, practical laboratory course is given, illustrative of the action of the more important drugs upon inferior animals. Professor CHASE; Dr. MCGREGOR.

8. THEORY AND PRACTICE OF PHARMACY.**1 hr.**

A lecture course. The history of the pharmacopœia will be discussed, also metrology, with special attention to the metric system. The processes used in pharmacy which are of especial interest to the medical student will be considered, such as solution, clarification, percolation, the determination of specific gravity, the preparation of emulsions, suppositories, cachets, tablets, triturates, etc. The prescription, from the pharmaceutical standpoint, will receive careful attention. Freshman year. Professor TEETERS.

10b (12a). PHARMACEUTICAL PREPARATIONS.

A laboratory course. The satisfactory production of twenty-five preparations embracing the various classes of the U. S. Pharmacopoeia, National Formulary, etc., also work in filling prescriptions illustrative of chemical and pharmaceutical incompatibility is required. Freshman year, second half, second semester; junior year, first half, second semester; seventy hours. Professor TEETERS; Miss COOPER.

13 (14). MEDICAL LATIN.**2 hrs.**

Those who have had but little opportunity to study Latin before entering upon their medical work will be afforded an opportunity in this course, for special drill, with a view to acquiring such knowledge as must be possessed by every accurate prescription-writer. It includes such drill as is outlined in any good treatise on prescription-writing. In the first se-

mester the grammar is studied with a view to presenting those principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine. In the second semester the study of the grammar is continued, special attention being given to pharmacopæial nouns and expressions. The prescription is taken up, its definition, its synthesis comprising form, grammatical construction, language, etc., followed by its analysis. A review of the entire work completes the course. Mr. WELLS.

15 (16). ELECTRO-THERAPEUTICS.

The instruction is by lectures, clinics, and experiments. The construction and manipulation of the various forms of electrical apparatus are first considered and the practical workings of batteries and their accessories are demonstrated. The fundamental laws of electricity are given briefly, those of use to the student and practitioner being emphasized. The consideration of the currents in common use follows. The uses of the galvanic, cautery, and faradic batteries are fully explained. The physiological effect of the various modalities, their therapeutical uses and indications by clinical instruction is made plain. The static machine, the coil, high-frequency apparatus, Finsen light, X-ray apparatus with all of its accessories, electric light cabinets are explained. A thorough course in electricity and all its specials is given.

A. Didactic course, junior year, twenty hours, Dr. CUTLER.

B. Clinical course, senior year, eighty hours, Dr. ———.

18. HYGIENE.

This course consists of seventy hours, thirty-five of which are devoted to lectures and recitations, the remainder of the time being spent in the laboratory.

In the lectures the following subjects are discussed from their hygienic point of view: water, sewage, plumbing, air, ventilation and heating, light and lighting, soil, disposal of the dead, disposal of refuse, disinfectants and disinfection, quarantine, foods, milk, food preservation, hygiene of occupation, offensive trades, relation of insects to disease, prevention of tuberculosis, venereal diseases and all other contagious and infectious diseases, vital statistics, functions of boards of health, personal hygiene and other questions that are of importance in preventive medicine.

The laboratory work consists of the chemical, bacteriological, and microscopical examination of water, milk, and foods, the testing for common adulterants, the testing of disinfectants, and other points of interest and value in the study of the preservation of health. Junior class. Mr. GUNN.

PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL, MR. MEENTS, MR. VALKENAAR

The department of pathology and bacteriology occupies the rooms on the third floor of the new laboratory building of the College of Medicine. This floor has two large laboratories for the general work of the department a large room for the special bacteriological work connected with the Iowa State Board of Health, a photographic room, a large room for the pathological museum, with twelve places for students doing special research work or carrying on original investigations, and five small rooms for office, preparation, and other special purposes. All of the laboratories are well-lighted, completely furnished and thoroughly equipped with new microscopes of the most modern type, and with all the apparatus necessary for carrying on any kind of investigation in the field of pathology or bacteriology. Each student is provided with a special composite topped table, a microscope, a locker, and the necessary staining reagents.

By reason of special association with the pathological institutes of Vienna, Leipzig, and Munich, the department has come into possession of a most complete and varied collection of diseased tissues and organs for the study of general and special pathological histology.

The course in pathology and bacteriology extends through the sophomore, junior and senior years, and is presented by means of lectures, recitations, demonstrations, and laboratory work. The lectures are illustrated by means of drawings, charts, and the Zeiss epidiascope (described on page 371). Preparations from the medical museum and fresh specimens derived from post-mortem examinations and the university clinics, are also used for illustration. The laboratory work comprises a thorough drill in pathological and bacteriological

technique, in the preparation and study of microscopical specimens of the various diseased conditions that occur in the human tissues and of all the more important micro-organisms.

***1 (2). GENERAL PATHOLOGY AND PATHOLOGICAL HISTOLOGY. 3 hrs.**

A lecture, recitation, demonstration, and laboratory course including the causation of disease processes, the disturbances in circulation and nutrition, inflammation and the various retrogressive and progressive disturbances of metabolism. The laboratory work will require two hours' work each week during the second semester. It comprises the preparation and study of slides illustrating the general pathologic changes that occur in the human tissues. Special attention is given to the drawing of the microscopic specimens. Second year. Professor ALBERT; Dr. EGDAHL; Mr. MEENTS.

3. PATHOLOGY OF DISTURBANCES OF METABOLISM. 1 hr.

This course deals with the pathology of such general diseases, as gout, diabetes, mellitus, diabetes insipidus, arthritis deformans, obesity, etc., that are produced or supposed to be due to disturbances in the metabolic processes of the body. The more important chemical and physiological factors causing the pathological conditions, or resulting from them will be considered. Dr. EGDAHL.

4. SURGICAL PATHOLOGY. 4 hrs.

A lecture, recitation, demonstration, and laboratory course comprising the several subjects in surgical pathology but paying most attention to the study of tumors. The extensive material from the University clinics is utilized, and this, with the collection in the possession of the laboratory, affords an opportunity for studying every variety of tumor formation. Special attention is paid to the differential gross and microscopical diagnosis of the tumors of most clinical interest and practical importance. Test examinations of unknown specimens are frequently given. Sophomore year. Professor ALBERT; Dr. EGDAHL.

5. BACTERIOLOGY. 8 hrs.

A lecture, recitation, and laboratory course, which includes the preparation of artificial culture-media, the cultiva-

*See note at bottom of page 111.

tion of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different micro-organisms, especially those related to the various infectious disease processes.

Special attention is given to the bacteriological analysis of water, and the practical application of bacteriologic technique to hygiene and clinical diagnosis. The lectures include such subjects as cannot properly be pursued in connection with the laboratory work. About seventy different micro-organisms are studied in the laboratory. The department is fortunate in having associated with it, the State Board of Health Bacteriological Laboratory, which furnishes much material that is utilized for class work. Junior year. Professor ALBERT; Dr. EGDAHL; Mr. VALKENAAR; Mr. MCKAY.

6. SPECIAL PATHOLOGY AND PATHOLOGICAL HISTOLOGY. 6 hrs.

This course deals with the pathology of the special tissues and organs of the human body. The lectures are supplemented by demonstrations of gross pathological preparations derived from the clinics, autopsies, and the pathological museum. Every fourth lecture will be illustrated by the use of the epidiascope. The laboratory work will comprise the preparation and study of microscopic sections, illustrating so far as possible, the subjects considered in the lectures. One session each week is devoted to the study of gross pathological material. Junior year. Professor ALBERT; Dr. EGDAHL; Mr. MEENTS.

7a. • HÆMATOLOGY.

A lecture, recitation, demonstration, and laboratory course devoted to the study of blood. The course will begin with a consideration of the technique necessary for making a blood examination, and the student will receive thorough training in the use of the Thoma-Zeiss and Gower's Hemocytometers, the Von Fleishl and Gower's hemoglobinometers, the Hammerschlog apparatus, the hematocrit, and the various other instruments necessary for a blood analysis. This is followed by a consideration of the general and special pathology of the blood—the student being supplied with cover-glass preparations representing the more important pathological conditions of the blood. The abundance of clinical material at the University hospital affords opportunity for thorough training in this sub-

ject. Senior year; one lecture and two hours of laboratory work each week. Professor ALBERT; Dr. EGDAHL.

7b (8a). CLINICAL MICROSCOPY.

A lecture, recitation, demonstration, and laboratory course devoted to the study of urine, sputum, stomach contents, vomitus, feces, milk, dropsical effusions, cyst contents, and animal parasites; also instruction in pathological technique, and such methods of clinical diagnosis as involve the usual microscopical and bacterial analyses. Special attention is given to the rapid diagnosis of fresh material, uterine curettings, and the early signs of malignancy. Senior year; one lecture and two hours laboratory work each week. Professor ALBERT; Dr. EGDAHL; Mr. VALKENAAR.

9 (10). AUTOPSIES.

Post-mortem examinations are made of all available cases. Since no stated time can be set for these demonstrations, members of both junior and senior classes are excused from other work in hand to attend the clinical autopsies.

Students are permitted to assist at post-mortem examinations and are instructed in the methods of making such examinations and of recording proper protocols of the results. Complete microscopical and bacteriological examinations are made of all pathological material and submitted to the students for comparison with the microscopic changes. Professor ALBERT; Dr. EGDAHL; Mr. MEENTS.

12a. PATHOLOGICAL TECHNIQUE. 10 or more hrs.

An optional laboratory course designed for those who desire to specialize in pathology. The work will include the principles and general methods of the investigation of such material as usually comes to the pathologist for diagnosis. Also the principles and methods involved in research work. Number in class limited to six. This course is also open to students in the Graduate College. Ten hours (or as much more time as desired). Professor ALBERT; Dr. EGDAHL.

13. BACTERIOLOGICAL TECHNIQUE. 12 hrs.

A laboratory course designed for advanced students and for physicians who desire to specialize in bacteriology. The course is intended principally to prepare the student for such

duties as are usually required of health officials. The work will include the technique necessary for every form of bacteriological analysis. The drill in practical work will be thorough and complete—such that the graduates of the course will be competent and reliable bacteriologists. Number in the class limited to six. This course is also open to students in the Graduate College. Twelve hours each week, during the first semester, or twenty-four hours each week, during the second quarter of the first semester. Professor ALBERT; Dr. EGDAHL.

15 (16). GRADUATE WORK.

The department offers opportunities, to candidates for higher degrees, for special work in pathology and bacteriology. The student will be assigned a private laboratory, will have free access to the special laboratories of the department and will be supplied with the tissues and reagents necessary for the work of such a course. Course and time to be arranged. Professor ALBERT.

THEORY AND PRACTICE OF MEDICINE

PROFESSOR BIERRING; ASSISTANT PROFESSOR VAN EPPS, DR. MCCLINTOCK, DR. GRANT, MR. IVINS

The instruction in internal medicine is given by lectures, recitations, reviews, and clinics. Special attention is given to the physical examination of patients and analysis of secretions, in order to interpret systematically the clinical findings.

The pathology, pathogenesis, clinical course of disease, and applied therapeutics are regarded as of special importance. By reason of the continued increase in the number of clinical cases it is possible to illustrate most of the diseases treated in the didactic courses. As a considerable number of patients are subsequently referred for operative treatment, the student has the opportunity of seeing the cases considered by more than one department.

The laboratory of the medical clinic is well equipped with all apparatus and reagents necessary for medical diagnosis, and furnished with general and special handbooks.

*Sophomore Year****2. INTRODUCTORY COURSE. 1 hr.**

An introductory course to the study of internal medicine, including the principles of physician's diagnostic methods. Assistant Professor VAN EPPS.

*Junior Year***3. PERCUSSION AND AUSCULTATION. 2 hrs.**

A demonstration and recitation course in which the student is trained in inspection, percussion, and auscultation of the normal body, especially the thorax, after which the same methods are applied in examining morbid changes in typical cases, the student being required to carry on the work personally under the supervision of the instructor. Assistant Professor VAN EPPS.

4. PHYSICAL DIAGNOSTICS. 2 hrs.

A demonstration course in which the work in physical examination of patients is continued; it includes the special methods applied in the examination of the abdominal organs and the nervous system. Instruction is also given in the taking of clinical histories. Assistant Professor VAN EPPS.

5 (6). THEORY AND PRACTICE OF MEDICINE. 3 hrs.

A lecture and recitation course. The study of internal medicine begins in the junior year, in the first three months of which there are two lectures and one recitation weekly on some elementary principles of medicine and the more important acute infectious diseases. In the rest of the year three recitations are held weekly on assigned topics regarding diseases or organs. Professor BIERRING; Assistant Professor VAN EPPS.

7 (8). CLINICAL MEDICINE. 4 hrs.

Two clinical conferences are held each week at which cases are presented for diagnosis and treatment. In the fourth term the junior students are assigned to cases in sections to take the history, work out the present condition and write the results. The histories are read in whole or part at the clinic. Professor BIERRING.

*See note at bottom of page 111.

Senior Year

9 (10). THEORY AND PRACTICE OF MEDICINE. 4 hrs.

A lecture and recitation course, including specially diseases not considered in the junior year, and not often seen in the clinic. In beginning the study of a disease, a lecture is given on the same, after which topics are assigned for textbook and reference work upon which recitations are held. Frequent use is made of charts, diagrams, pathological specimens, and clinical records from the hospital, to illustrate the different phases of the disease under consideration. Professor BIERRING.

11 (12). WARD CLASSES. 2 hrs.

Sections of the senior class are given special bedside instruction in treatment and daily visits are made, to observe the progress of cases and to practise diagnostic methods. Professor BIERRING; Assistant Professor VAN EPPS.

13 (14). CLINICAL MEDICINE. 4 hours.

Two clinics are held each week at which cases are presented for diagnosis and treatment. Patients are assigned to members of the senior class, who take the history, examine the present condition, and write the results, with differential diagnosis and plan of treatment. Each case is to be followed by the student assigned as long as it remains in the hospital. Whenever practicable, methods of treatment such as massage, lavage, etc., are carried out by the student. The histories are read in whole or part at the clinical conferences. Professor BIERRING.

15 (16). PRACTICAL ELECTRO-THERAPEUTICS. 3 hrs.

A demonstration course on the use of electricity in the diagnosis and treatment of disease. Advanced students are instructed to apply the different methods of treatment personally and thus to obtain a practical knowledge. The student is taught also the methods of generating X-rays and of employing them in diagnosis and therapeutics. Special work is also carried on in skiagraphy and its relation to diagnosis. Assistant Professor VAN EPPS.

17 (18). NEUROLOGY. 1 hr.

A lecture, recitation, and demonstration course on nervous

diseases and neurological diagnosis, with special reference to the relation of neuro-pathology to clinical neurology. Assistant Professor VAN EPPS.

20a. PÆDIATRICS.

40 hrs.

This subject is presented by means of lectures and recitations. Special stress is laid upon diagnosis, particularly of the contagious diseases and those of the gastro-enteric tract. The practical treatment of the common ills of infancy and childhood receives careful attention. Forty hours.

Most of the infants born in the obstetric clinic are artificially fed and each student is required to become thoroughly familiar with this important branch.

Throughout the year sick children are presented before the general medical clinic. Dr. GRANT.

21 (22). CLINICAL LABORATORY, ADVANCED WORK AND SPECIAL RESEARCH.

A clinical laboratory of the department of internal medicine is located on the third floor of the general laboratory hall; this, in connection with the clinical laboratory in the University hospital affords ample opportunities to senior and advanced students to pursue special research in internal medicine.

Each member of the senior class is required to carry on all chemical and microscopic analyses necessary in the study of patients assigned to him, under the supervision of the head and the clinical assistant of the department.

Ample provision has been made for all special apparatus in hæmatology, cryoscopy, and the estimation of blood pressure.

Candidates for higher degrees and members of the Graduate College may, in the clinical laboratory, carry on special work in internal medicine leading to such degrees under the supervision of the head of the department. Professor BIERRING.

SURGERY

PROFESSOR JEPSON; ASSISTANT PROFESSOR BURGE, DR. LORD,
DR. ———

This subject is graded in the third and fourth years, and is taught by lectures and recitations; by laboratory work in

minor surgery, operations on the cadaver, and surgical technique; by ward classes, and by clinics in the University hospital, at which operations in every branch of surgery are open to the class.

***1. PRINCIPLES OF SURGERY. 3 hrs.**

Hyperæmia; simple inflammation; infective inflammation; the process of repair; gangrene; shock; fever; surgical fevers; septicæmia; pyæmia; erysipelas; hospital gangrene; tetanus; hydrophobia; actinomycosis; anthrax; glanders; snake-bite; tuberculosis; surgical tuberculosis of joints and bones; syphilis. Lectures and recitations; junior and senior years. Professor JEPSON.

2. PRACTICE OF SURGERY AND ORTHOPEDIC SURGERY. 4 hrs.

Injuries and diseases of regions and systems; fractures and dislocations; deformities, with general principles of pathology and treatment. Lectures and recitations; junior and senior years. Professor JEPSON.

5. MINOR SURGERY, BANDAGING, AND DRESSING. 2 hrs.

Practical instructions, by demonstration and practice, in the various manipulations of minor surgery, including the application of splints and bandages. Junior year. Assistant Professor BURGE; Dr. LORD.

6. OPERATIVE SURGERY. 2 hrs.

A dissecting-room course, consisting of all the operations in modern surgery, performed by sections of the class, under the supervision of instructors. Senior year. Assistant Professor BURGE; Dr. LORD.

7. OPERATIVE TECHNIQUE. 1 hr.

Lectures and practical work on operative procedures, principles of asepsis, antisepsis, and sterilization; preparation of patient and operator, of instruments and operating rooms; anæsthesia and anæsthetics; hæmostasis; ligatures, sutures; dressing and care of wounds. The technique of kidneys, gall-bladder, stomach, and intestinal surgery, and other operations, such as trephining, tracheotomy and intubation, are illustrated before the class on the lower animals under antiseptic regulations. Junior year. Dr. ———.

*See note at bottom of page 111.

9 (10). CLINICAL SURGERY.**6 to 8 hrs.**

Clinics, at which advanced students are required to assist, and at which operations and manipulations in general surgery are demonstrated to juniors and seniors, and to other students whose schedule does not prevent attendance. Professor JEPSON.

11 (12). WARD CLASSES.**5 hrs.**

Examinations, observation, and surgical-dressing of patients, in wards of the University hospital, in company with the assistant to the chair of surgery. Class in sections; senior year. Assistant Professor BURGE; Dr. LORD.

13 (14). ANÆSTHETICS.

Each member of the class will receive practical instruction in the production of general and local anæsthesia, under the supervision of the anæsthetist of the surgical clinic. Class in sections, one section a week. Junior year.

OBSTETRICS**PROFESSOR WHITEIS; DR. KRAUSE**

This course embraces a thorough training in diagnosis of pregnancy, the physiology and pathology of pregnancy, diagnosis of presentations and positions, the management of labor, normal and abnormal, measurements of the pelvis, and a complete course upon surgical obstetrics; taught by wet specimens, upon the manikin, and upon patients when practicable. From twelve to twenty confinements are studied before the class each year.

The class is divided into sections for study and drill in diagnosis and in operative obstetrics.

1 (2). GENERAL OBSTETRICS.*3 hrs.**

Lectures upon obstetrics, including a discussion of the physiology, pathology, and management of gestation, management of labor, normal and abnormal, management of the puerperium, dystocia, and care of new-born child. Junior year. Professor WHITEIS.

*See note at bottom of page 111.

3, 4. OPERATIVE OBSTETRICS.

Course of six lectures, illustrated by both dry and wet specimens. Senior year. Professor WHITEIS.

5 (6). COURSE UPON THE MANIKIN.**1 hr.**

A course for the diagnosis and demonstrating the use of forceps and other mechanical appliances in obstetrical manipulation. Equivalent to one hour each week during the session. Senior year. Professor WHITEIS.

GYNECOLOGY

PROFESSOR GUTHRIE; PROFESSOR WHITEIS, DR. KRAUSE

The instruction in this subject for both junior and senior classes combines lectures, recitations, and demonstrations in both major and minor operative gynecology.

1 (2). BEDSIDE CLINIC.*1 hr.**

A ward clinic is held every week, where each student has an opportunity to examine the patient and to observe both the post-operative condition and the treatment of all operative cases. The merits of each case are discussed and indications for after treatment carefully studied. Students are drilled in the matter of special diet and hygiene. Senior year.

3 (4). WARD CLASS.**2 hrs**

A course in diagnosis is given each week throughout the year, at which sections of the class are instructed and drilled in the matter of securing good histories. They are taught how to conduct an examination of a patient and from the history and the physical condition to form correct diagnosis. Senior year.

5 (6). GENERAL GYNECOLOGY.**2 hrs**

The first semester is occupied with lectures on the general scope of the subject, methods of examination etiology, pathology, and general management of gynecological patients. The rest of the course is devoted to a discussion of special conditions, operative and gynecological technique. Junior and senior years.

*See note at bottom of page 111.

7 (8). CLINIC.**3 hrs.**

A clinic held each week, demonstrating methods of examination and diagnosis, and illustrating both major and minor gynecological operations. A constant effort is made to instruct in modern methods and improved technique. Junior and senior years.

9. GYNECOLOGICAL LANDMARKS.**1 hr.**

The study of landmarks and cultivation of the sense of touch in palpating pelvic viscera.

**OPHTHALMOLOGY, OTOTOLOGY, RHINOLOGY, AND
LARYNGOLOGY**

PROFESSOR DEAN; DR. BAILEY, DR. HEARD, DR. CEARBY.

The department of ophthalmology, otology, rhinology, and laryngology occupies the ground floor of the east wing of the University hospital. The suite of rooms comprises a large waiting room, a clinical room, a combined operating and treatment room, and a clinical laboratory.

The clinical room is supplied with lights on brackets with universal movement, so that each student has both gas and electric light for his individual work. The treatment and operating room is well equipped with instruments for operations upon the eye, ear, nose, and throat and for their treatment.

Connected with the clinical room is a clinical laboratory in which are microscopical specimens of all the diseases of the eye, ear, nose, and throat. There is also an abundance of anatomical sections showing the pathological, the normal, and the anomalous conditions of the eye, ear, nose, and throat. These specimens are prepared and arranged so that the student may study them at his leisure. After diagnosing his case in the clinic room, he may in an adjacent room examine the gross and microscopical characteristics of the disease present. Examinations of the various secretions and discharges obtained in the clinic are made here.

Bacteriological investigations may also be made in this laboratory. In the new laboratory building is a clinical labora-

tory for this department. This laboratory is abundantly supplied with pathological specimens of diseases of the eye, ear, nose, and larynx, as well as normal anatomical specimens of these organs. These specimens have the soft parts adherent to the bone, and are hardened in formaldehyde and alcohol. The laboratory is well equipped with microscopes, microtomes, and instruments and apparatus for the dissection of specimens. The laboratory also contains specimens already dissected to which the student may refer at any time.

Any senior or graduate student wishing to make a special study of these subjects is given free use of these specimens and instruments and is furnished with the anatomical material for dissection, both normal and pathological, and with material for mounting specimens, etc.

Instruction in this department is given by lectures, recitations, demonstrations, and personal work in the clinic. The three kinds of clinics, the out-clinic, treatment-clinic, and the clinic for major operations are attended only by groups of students. By this group-method of instruction each student receives personal instruction at each session and at the operating clinic is able to see the operation.

In the out-clinic each student is assigned one or more patients whom he himself must examine and diagnose, and for whom he must recommend treatment.

The instructors in charge of the clinic discuss each new case with the student who has had charge of it, pointing out mistakes and calling attention to important features of the diagnosis and of the differential diagnosis.

The treatment clinic is visited by patients who have been subject to operation and who need daily care. The students, two at a time, attend these treatment clinics and assist in the treatment, and are given demonstrations in the treatment of such cases as they cannot well handle themselves.

At the operating-clinic which is held in the surgical operating room of the hospital are performed only the major operations on the eye, ear, nose, and throat. The entire class attends these clinics, groups of six students being called from time to time to witness the operations close at hand. In this

way each student during the year gets a close view of all the different kinds of operations.

Special attention is given to refraction. The department is well equipped with apparatus and instruments for studying the refraction of the eye. Groups of students are given demonstrations on the ophthalmometer, amblyometer, deviometer, etc., and are given instruction in the use of the ophthalmoscope and retinoscope. At the out-clinic students are assigned by twos to the practical consideration of refraction cases and under the direction of instructors are required to determine the error of refraction and to prescribe lenses and fit the frames, first having gone over all the objective and subjective tests. For such students as wish to take special work in refraction a course is given in which the finer and more intricate tests are explained, including the examination of the extra-ocular muscles and pathological conditions as they may exist in the back of the eye. •

Three out-clinics, three treatment-clinics, and one operative-clinic are held in this department each week, in order that the class may do work in sections.

***1. METHODS OF EXAMINATION AND DIAGNOSIS. 2 hrs.**

The anatomy and physiology of the eye, ear, nose, and throat. Diseases of the ear, nose, and throat; of the eyelids and the eyeball. Senior year. Professor DEAN; Dr. BAILEY.

2. DISEASES OF THE EYE AND EAR. 2 hrs.

Fundus lesions and relations of diseases of the eye to internal medicine; diseases of the ear, nose, and throat. Senior year. Professor DEAN; Dr. BAILEY.

3 (4). REFRACTION.

In connection with the out-clinic students, two at a time, adjust refractive errors of patients. Senior year. Professor DEAN; Dr. BAILEY; Dr. HEARD; Dr. CARY.

5 (6). OPERATIONS ON THE EYE, EAR, NOSE, AND THROAT.

The class in sections will perform major operations on temporal bones hardened in alcohol and eye-operations upon eyes fixed in a manikin. Senior year. Professor DEAN; Dr. BAILEY.

*See note at bottom of page 111.

7 (8). PRACTICAL CLINICAL INSTRUCTION. 2 hrs.

Out-clinics at the University hospital in the diagnosis of diseases of the eye, ear, nose, and throat, in methods of examining, in the practical use of the instruments, and in the application of operative and medical remedies. Groups of not more than twenty students each. Senior year. Professor DEAN; Dr. BAILEY; Dr. HEARD; Dr. CRABY.

9 (10). CLINIC. 1 hr.

Once a week major operations on the eye, ear, nose, and throat. Senior year; two or three hours at a time. Professor DEAN; Dr. BAILEY.

11, 12. ANATOMY OF THE EYE, EAR, NOSE, AND THROAT. 4 hrs.

Clinical, microscopical and practical anatomy of the eye, ear, nose, and throat. Course optional. Number limited to two. Dr. BAILEY.

13 (14). TREATMENT CLINIC. •

Three clinics a week are held. Students two at a time attend and treat patients suffering with diseases of the eye, ear, nose, and throat. Senior year. Dr. BAILEY.

15 (16). GRADUATE WORK.

Courses are offered for students who have their baccalaureate degree, and such persons may choose either their major or minor in this department. They are allowed to take the senior work of this department during their junior medical year and then are prepared to do the advanced work during their senior year.

Courses for graduate students with the degree of Doctor of Medicine are arranged to suit individual needs.

The course in advanced refraction includes all special tests. Students are assigned the entire care of certain patients. The record is turned in to the instructors for examination and correction.

Graduates are allowed to assist in out-clinics, making some of the treatments and aiding in the demonstration of certain cases.

Ward classes are conducted by the head of the department and the instructors, thus making it possible for the students to follow the after-treatment carefully.

DERMATOLOGY

DR. KESSLER

Lectures, recitations, and clinics are given during the senior year. Throughout the session one hour and a half a week.

DENTISTRY

PROFESSOR BREENE

The lectures on this subject comprise such principles of dental pathology and therapeutics as are essential to the practitioner of medicine. Instruction is given in the application of mechanical appliances for the correction of cleft palate, also in methods of applying retention in fractures of maxilla. Senior year, second semester, five hours.

MEDICAL JURISPRUDENCE

JUDGE WADE

The course is opened with the consideration of the nature and purposes of law, then of laws affecting the practice of medicine. Malpractice is discussed and the liability of the physician to the patient and others, including the liability of municipalities for the treatment of patients. The questions of legal insanity, expert evidence and expert witnesses, hypothetical cases, causes of death, and post mortem examination follow, and, in conclusion, the subject of state and local boards of health, quarantine regulations, etc. Senior year, first semester, twelve hours.

ALUMNI LIST

Graduates of this college are requested to acquaint the secretary of the faculty immediately of their postoffice addresses and to inform him promptly of any change of residence.

TEXT-BOOKS AND BOOKS OF REFERENCE

The following are recommended by the faculty:

Medical Dictionary—Gould, Duane, Dunglison.

Anatomy—Cunningham, Huntington on the Peritoneum, Gray, Morris, Gerrish, Treve's Surgical Applied Anatomy.

Physiology—Brubaker, Howell, Hall, American Text Book, Kirkes.

General Chemistry—Remsen, Smith, Roscoe and Schorlemmer.

Analytical Chemistry—Rockwood.

Physiological Chemistry—Rockwood, Hammersten, Simon, Herter.

Urine Analysis—Purdy, Ogden.

Toxicology—Haines and Peterson.

Surgery—Park, American Text-Book of Surgery, DaCosta, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging, Warren's Surgical Pathology, Senn on Tumors.

Pathology—Colpin, Stengel, Delafield & Prudden, Thayer, American Text-Book, Warren's Surgical Pathology, Kauffman—Specielle Pathologische Anatomie; Ziegler, Green.

Bacteriology—McFarland, Muir & Ritchie, Crookshank, Park, Williams, Levy & Klemperer, Goadby—The Mycology of the Mouth, Prescott & Winslow—Elements of Water Bacteriology.

Bacteriological Technique—Eyre.

Clinical Diagnosis—Lenhartz, Boston, Simon, Wood, Emerson.

Hæmatology—Ewing, Cabot, DaCosta.

Practice of Medicine—Osler, Anders, Hare, Tyson, French, Strumpel, Thompson, Eichorst, American Text-Book of Theory and Practice of Medicine, Albutt's System.

Physical Diagnosis—Cabot, Herrick, Tyson.

Medical Diagnosis—Butler, Musser, Vierordt, DaCosta, Flint.

Obstetrics—Williams, American Text-Book of Obstetrics, Dorland, Herst.

Obstetric Surgery—Grandin and Jarmin.

Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe, Dudley.

Materia Medica—White and Wilcox, Potter, Cushny.

Therapeutics—Sollman, Hare, Wood, Forchheimer.

Diseases of Children—Holt, Rotch, Koplik, Starr's American Text-Book, Fruehwald and Westcott.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Elwell.

Histology—Huber, Bailey, Stoehr, Piersol, Schafer Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology and Rhino-Laryngology—Deuch, Bosworth, Kyle, Price-Brown, Buck, McBride, American Text-Book.

Insanity—Compendium of Insanity, Chapin; Mental Diseases, Berkley; Nervous and Mental Diseases, Church and Peterson.

Dermatology—Stelwagon, Crocker.

Hygiene—Notter and Firth, Abbott.

Dietetics—Thompson, Pavy.

Electro-Therapeutical Practice — Neiswanger, Massey, Morrell.

Text-books and books of reference can be obtained at an average cost per volume of from \$2.00 to \$5.00, or \$15.00 to \$20.00 per year.

The thorough study of a single text-book in each department is of far greater advantage to the student during his college course than the cursory reading of several. It is therefore advised that a single work in each branch be chosen, using any of the others for reference. The first one of each of the above lists is preferred.

THE UNIVERSITY HOSPITAL

OFFICERS

LEE WALLACE DEAN, M. S., M. D.
Director

PERRY WESSEL, M. D.
House Physician

WILLIAM FRED BOILER, M. D.
House Physician

HELEN BALCOM, Graduate Nurse
*Superintendent of the Hospital and Principal of the Nurses'
Training School*

ANNA MARIE SLATER
Matron

THE SCHOOL FOR NURSES

The University conducts in connection with the University Hospital and the College of Medicine a training school for nurses designed to provide the best instruction and experience for those who desire to enter the profession of nursing. The course extends over three years and provides instruction and experience in handling all kinds of cases. The instruction is given by the regular professors and lecturers of the College of Medicine and the principal of the training school, together with some special lectures by outside authorities on topics of interest and importance to nurses. An information bureau is conducted in connection with the school for the benefit of the nurses graduated. Persons desiring to enter the training school will do well to make application some months before they are ready to enter upon their duty, as it may be some time before a vacancy occurs.

Courses of lectures are given each year by the members of the medical faculty as follows:

Ethics in Nursing and Gynecology—Professor GUTHRIE.

General Surgery and Anæsthesia—Professor JEPSON.

Obstetrics—Professor WHITEIS.

Internal Medicine and Infectious Diseases—Professor BIERRING.

Anatomy—Professor PRENTISS.

Physiology—Professor MCCLINTOCK.

Diseases of the Skin—Dr. KESSLER.

Materia Medica—Professor CHASE.

Food Dietetics—Professor ROCKWOOD.

Bacteriology—Professor ALBERT.

Eye, Ear, Nose, and Throat—Professor DEAN, Dr. BAILEY.

Diseases of Children, Urinalysis—Assistant Professor VAN EPPS.

Bandaging, Fractures, Dislocations, etc.—Assistant Professor BURGE.

**THE COLLEGE OF
HOMEOPATHIC MEDICINE**

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.

PRESIDENT.

GEORGE ROYAL, M. D.

DEAN; Professor of Materia Medica and Therapeutics.

WILLIAM LE CLAIRE BYWATER, M. D., O. et A. Chir.

VICE-DEAN; Professor of Ophthalmology and Otology, and Director of the Homeopathic Hospital.

CHARLES HERBERT COGSWELL, M. D.

Professor Emeritus of Obstetrics and Diseases of Women.

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.

Professor and Head of the Department of Chemistry and Toxicology.

ERNEST ALBERT ROGERS, D. D. S.

Professor of Regional Anatomy and Clinical Dentistry, and Superintendent of Clinics.

BENJAMIN RICHARD JOHNSTON, M. D.

Professor of Theory and Practice.

FREDERICK JACOB BECKER,, M. D.

Professor of Obstetrics and Gynecology.

JOHN THOMAS MCCLINTOCK, B. A., M. D.

Professor of Physiology.

HENRY ALBERT, M. S., M. D.

Professor of Pathology and Bacteriology.

HENRY JAMES PRENTISS, M. E., M. D.

Professor of Anatomy, and Director of the Histological Laboratory.

FRANK CONQUELON TITZELL, M. D.

Professor of Surgery.

ROSCOE HENRY VOLLAND, D. D. S., M. D.

Assistant Professor of Operative Dentistry.

THEODORE LINCOLN HAZARD, M. D.

Lecturer on Paedology.

SELSKAR MICHAEL GUNN, B. S.

Lecturer on Hygiene.

MARTIN JOSEPH WADE, LL. B.

Lecturer on Law.

MAX ERNEST WITTE, M. D.

Lecturer on Nervous Diseases.

FRANK HARVEY CUTLER, B. S., M. D.

Lecturer on Electro-Therapeutics.

ANFIN EGDAHL, B. S., M. D.

Instructor in Pathology and Bacteriology.

FREDERICK POMEROY LORD, A. B., M. D.

Demonstrator of Anatomy, and Assistant in Surgery.

WALTER HENRY FOX, M. D.

Demonstrator in Anatomy, Histology, and Embryology.

JOHN JOSEPH LAMBERT, M. S.

Instructor in Histology and Embryology.

CHARLES DELOS POORE, A. C.

Instructor in Chemistry.

RUDOLPH ERNST KLEINSORGE, B. S.

Assistant Instructor in Physiology.

ROE EUGENE REMINGTON, B. A.

Assistant Instructor in Chemistry.

ARTHUR DANIEL WOODS, M. D.

Assistant Demonstrator in Anatomy, Histology, and Embryology.

ALICE CATHERINE BEATLE, Graduate Nurse.

Superintendent of the Homeopathic Hospital and Principal of the Nurses' Training School.

JOSEPH MAXWELL CADWALLADER.

Senior Undergraduate Demonstrator in Anatomy, Histology, and Embryology.

CHARLES HERBERT COGSWELL, JR., B. S., M. D.

Assistant in Surgery.

IRA NELSON CROW.

Assistant in Histology and Embryology.

WILLIAM McMICKEN HANCHETT, A. B.

Assistant in Pathology and Bacteriology.

LEORA JOHNSON, M. D.

Clinical Assistant to the Chair of Surgery.

ISAAC WELLMAN LEIGHTON.

Undergraduate Assistant in Histology and Embryology.

HERVEY FULTON MASSON.

Interne.

WILLIAM GEORGE MCKAY, M. S.

Assistant in Pathology and Bacteriology.

DIEDRICH JANSSEN MEENTS, B. S.

Senior Assistant in Pathology and Bacteriology.

JAMES MOORHEAD, M. D.

Assistant in Theory and Practice.

WILLIAM JOHN MORGAN, B. S.

Storekeeper in Chemistry.

GEORGE MOSBY.

Interne.

JOHN THOMAS PADGHAM.

Undergraduate Assistant in Physiology.

FREDERICK ALBERT SLYFIELD.

Attendant in Pathology and Bacteriology.

EDGAR FRANCIS SMITH.

Junior Undergraduate Demonstrator of Anatomy, Histology, and Embryology.

FREDERICK WILLIAM VALKENAAR.

Senior Assistant in Clinical Microscopy.

EVERETT CHAPMAN WARD.

Undergraduate Assistant in Histology and Embryology.

NELSON DREW WELLS, B. PH.

Tutor in Medical Latin.

THE COLLEGE OF HOMEOPATHIC MEDICINE

ORGANIZATION

The establishment of the College of Homeopathic Medicine was the outgrowth of a memorial presented to the board of regents in 1872. This was followed in 1876 by an act of the legislature authorizing the regents to appropriate a certain sum for the foundation of chairs of materia medica and theory and practice for this department.

The college at first occupied a rented building, but in 1878 a small hall was erected for its use. The college building and hospital was ready for use January first, 1895, while the Hall of Anatomy and the General Medical Laboratories were first used in 1904.

The college in the beginning offered a course of two years of five months. This has been lengthened by various stages, and now the course extends over four years of nine months. The year is divided into two semesters, each of two quarters of nine weeks.

Men and women are admitted to the college on equal terms.

BUILDINGS

For description see under BUILDINGS, page 352.

HOSPITAL

The University Hospital of the College of Homeopathic Medicine is a modern and commodious brick building, four stories in height, and situated on the Medical Quadrangle. It

accommodates thirty-five beds, with ten private rooms, all being equipped with modern appliances and apparatus.

This building also contains a large clinical amphitheater, dispensary, administrative offices, the library of the college, and various lecture and recitation rooms. The lectures, clinics, etc., of the college proper are held here, in convenient proximity to the hospital wards.

CLINICS

Abundant material for clinical purpose is supplied from the hospital. The following clinics are held:

SURGICAL CLINIC

The surgical clinic is open to students of all the classes, but attendance is not obligatory in the freshman year. The general arrangement and clinical system are as follows: the senior interne at the commencement of the year details two students from the senior class as clinical assistants; one of these retires after a week's service, one after two weeks; one student is detailed each week thereafter, so that each senior student has two consecutive weeks of clinical work. The duties are to assist at all clinics and sub-clinics, and to attend to all dressings in the hospitals, under the supervision of the senior interne.

Saturday, 9:30 A. M. Professor TITZELL.

MEDICAL CLINIC

The medical clinic is open to all classes, and regular attendance is required of juniors and seniors.

The first consideration in conducting this clinic is to give the student training in diagnosis, and the plan adopted gives the senior student advantages equivalent to a graduate course.

New cases, as soon as received, are placed in charge of members of the senior class for examination. A complete diagnosis must be made in writing, after which the patient is examined in open clinic and a criticism of the papers follows. These papers are preserved and constitute an important factor

in determining the student's standing. Sub-classes under guidance of an instructor visit the homes of out-patients for the study of acute disease.

The treatment prescribed is in accordance with the established principles of homeopathy.

Wednesday, 2:00 to 4:00 P. M. Professor JOHNSTON.

MATERIA MEDICA CLINIC

At the clinic of materia medica a member of the senior class is required to elicit from the patient the family and personal history, the sensations, the modalities, and all concomitant symptoms. He then arranges these symptoms, pointing out those characteristic, and suggesting a remedy. The other members of the class are also required to suggest a remedy, giving their reasons for so doing from the group of symptoms which has been elicited. The instructor will then differentiate between the remedies presented by the class if there be more than one, and will determine the remedy to be administered.

Thursday, from 2:00 to 4:00 P. M. Professor ROYAL.

GYNECOLOGICAL CLINIC

During the senior and the junior years two hours each week are devoted to clinics at which the students are given special advantages in the examination and diagnosis of the various diseases and injuries of the genital organs of women, and in which they assist at the various operations. The number of students admitted is small enough to give all an opportunity of seeing each step in the work and becoming familiar with the same.

Friday, from 1:30 to 3:00 P. M. Professor BECKER.

OBSTETRICAL CLINIC

By special appointment obstetrical clinics are held to which senior and junior students are admitted. Senior students are given the opportunity of diagnosing the foetal presentations and of observing the mechanism and conduct of the various stages of labor. By special arrangement with the board of regents patients wanting a home prior to their con-

finement and proper medical attendance during the same may avail themselves of this clinic free of charge and at the same time be given privacy and comfort.

Any one desiring information regarding the same is asked to correspond with Professor BECKER.

EYE, EAR, NOSE, AND THROAT CLINIC

Clinical instruction is a most important part of the work in this department. The student is required to question the patient, eliciting symptoms sufficient for a diagnosis. This being made, with the assistance of the other members of the class, he is required to suggest a remedy and to outline the treatment. He is permitted to perform minor operations and to give treatments in catarrhal conditions of the eye, ear, nose, and throat, under the supervision of the head of the department.

The large clinics afford an opportunity to become familiar with many pathological conditions, and the instruction is of a very practical nature.

Two clinics are held each week during the school year: one on Tuesday at one o'clock is conducted in the amphitheater, into which all classes of eye, ear, nose, and throat cases are received; the other meets on Friday at three o'clock in the basement clinic-room for treatment of ear, nose, and throat. Sub-clinics will be called at any time for emergency cases. Professor BYWATER.

PEDIATRICS

At the children's clinics the seniors are expected to examine the patients, diagnose the diseases, prescribe the proper remedies, and familiarize themselves with the treatment of this class of patients. Monday. Dr. HAZARD.

ADMISSION OF PATIENTS

Medical and surgical treatment are free for patients entering the general clinics. Hospital care is furnished for from \$5.00 to \$20.00 a week. An operating-room fee of \$5.00 is required for all surgical cases.

Correspondence with reference to admission to the clinics or the hospital may be addressed to the professor having charge of the particular clinic, or to Professor BYWATER, director of the hospital. Arrangements can be made for the reception between the 15th of September and 15th of April of a limited number of obstetrical cases only.

DISPENSARY

In connection with the clinic a dispensary has been opened where the clinical assistants, under the direction of the faculty, prescribe for and visit out-patients, and attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of work, affording at once material for the clinics and practical instruction to the attendant.

TUITION

For tuition and expenses see pages 72 ff.

REQUIREMENTS FOR ADMISSION

For requirements for admission see pages 355 to 357.

PROGRAM OF ENTRANCE EXAMINATIONS

For program of entrance examinations see pages 357, 358.

PROMOTION

Admission to higher classes is secured only by examination, oral, written, or both, combined with the quiz-record and class standing. A failure to pass in two or more studies will prevent advancement until the conditions are satisfied. A failure in one study will not prevent advancement, but the student must pass a satisfactory examination in that study before the close of the year to which he is promoted. Students presenting credentials from colleges of homeopathic medicine in good standing in the American Institute of Homeopathy, may be admitted to the classes to which such credentials would admit them in the college from which they are issued. The faculty reserves the right to determine the class which any student

shall enter, in the case of applicants who have had one or more years in other medical schools.

All students having deficiencies in the medical work will appear for examination according to the schedule given for Saturday, September 21, on page 360.

DEGREE OF DOCTOR OF MEDICINE

1. The candidate must be not less than twenty-one years of age.

2. Moral character must be known to be unexceptionable.

3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than twenty-eight weeks, and no two of the four courses shall be within the same year.

4. The deportment during the term must have been unexceptionable.

5. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the college.

In case of failure to pass any of the examinations the student may be re-examined at the opening of the next session. If he fail in this second examination he will be allowed to present himself for re-examination only after attendance upon another course of lectures.

Students of the senior class who are candidates for the degree of Doctor of Medicine must, before May first, present to the secretary of the faculty a certificate of legal age and of good moral character, also receipts from the secretary of the board of regents showing that all fees have been paid.

DEGREE OF MASTER OF SCIENCE IN MEDICINE

For outline of requirements see pages 360, 361.

COMBINED COURSES

For outline of combined course leading to the degree of B. S. and M. D. see pages 106, 107; for requirements see page 361.

COURSES OF INSTRUCTION

ANATOMY

**PROFESSOR PRENTISS; DR. LORD, DR. FOX, DR. WOODS, MR. CAD-
WALLADER, MR. SMITH**

For description of courses see pages 362 to 365.

PHYSIOLOGY

PROFESSOR MCCLINTOCK; MR. KLEINSORGE, MR. PADGHAM

For description of courses see pages 365 to 367.

CHEMISTRY AND TOXICOLOGY

PROFESSOR ROCKWOOD; MR. POORE; MR. REMINGTON

For description of courses see pages 367 to 370.

HISTOLOGY AND EMBRYOLOGY

**PROFESSOR PRENTISS; DR. FOX, DR. WOODS, MR. LAMBERT,
MR. CROW, MR. LEIGHTON, MR. WARD**

For description of courses see pages 370 to 373.

PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDahl, MR. MEENTS, MR. VALKENAAR

For description of courses see pages 376 to 380.

MEDICAL JURISPRUDENCE

JUDGE WADE

For description of course see page 391.

ELECTRO-THERAPEUTICS AND MASSAGE

DR. CUTLER; DR. ———

For description of course see page 375.

DENTISTRY

PROFESSOR ROGERS

The lectures on this subject comprise such principles of dental pathology and therapeutics as are essential to the practitioner of medicine. Instruction is given in the application of mechanical appliances for the correction of cleft palate, also in methods of applying retention in fractures of maxilla. Junior year, second semester, five hours.

HYGIENE

MR. GUNN

For description of course see pages 375, 376.

MATERIA MEDICA AND THERAPEUTICS

PROFESSOR ROYAL; ASSISTANT PROFESSOR VOLLAND

The work of the department is graded and extends over the entire course of four years.

Freshman Year—During the first semester one hour each week is devoted to the study of the organon. During the second semester one hour each week on institutes and the principles of homeopathic medicine. Professor ROYAL.

One hour each week during the entire year will be devoted to the study of the characteristic symptoms of the polycrests.

Careful attention is given both in lectures and in quizzes to the individuality of each drug presented. Assistant Professor VOLLAND.

An examination is held in these branches at the end of each semester. Text-books: Hahnemann's *Organon*, Dewey's *Essentials of Materia Medica*, Nash's *Leaders*.

Sophomore Year—Two hours each week during the entire year is devoted to the study of drugs. Special attention is given to their action on the different tissues of the body. Careful attention is given both in lectures and in quizzes to the elective affinity of each drug presented. An examination is held at the end of the year. Professor ROYAL; Assistant Professor VOLLAND.

Junior Year—Three hours each week, besides one clinical lecture. The characteristic symptoms of each drug are reviewed, and the concomitant symptoms are grouped about these characteristics, so as to classify them for therapeutic use. The remedies are divided into two groups, one of which is considered each year. Professor ROYAL.

Senior Year—The seniors have three hours each week in connection with the juniors, the work being the same as outlined above. At the clinic each senior is called upon repeatedly to obtain from the patient the history of the case and the symptoms for therapeutic purposes. One additional hour each week is devoted to the comparison of the symptoms of the different drugs belonging to the same class; during this hour instruction is given in the use of repertories. Professor ROYAL.

Text-books: Farrington's *Clinical Materia Medica*, Boericke's *Materia Medica*, Cowperthwaite's *Materia Medica*, Allen's *Hand-Book*, and Lilienthal's *Therapeutics*.

Three weeks, during each year, is devoted to the proving of drugs. During these three weeks the junior and senior classes are excused from all other college work.

THEORY AND PRACTICE AND CLINICAL MEDICINE

PROFESSOR JOHNSTON; DR. MOORHEAD

The work of this department is arranged to cover the

ground with which the physician should be familiar in a complete and modern manner.

As noted elsewhere in this announcement a full laboratory course is given during the sophomore year.

The major part of the lecture work is meant to be completed in the junior year. The senior year is thus left free for practical application of the preceding year's studies in the clinics hospital, dispensary, and among the out-patients.

The system of instruction used is a combination of the lecture and recitation methods. A printed syllabus giving the salient points of the subject under discussion is furnished each student.

The following courses are required:

***1 (2). PHYSICAL DIAGNOSIS. 1 hr.**

The principles of physical diagnosis; training in eliciting physical signs; study of the normal subject. Sophomore year. Professor JOHNSTON.

3 (4). DISEASES OF THE CHEST. 1 hr.

Instruction in this subject is given for the most part by the clinical lectures devoted to the study of etiology, symptomatology, diagnosis, and treatment. The senior student is required to make and defend his own diagnosis. His fitness for graduation is determined by his proficiency at the bedside. Junior year. Professor JOHNSTON.

5 (6). DISEASES OF THE KIDNEYS AND BLOOD.

Following the work in the laboratory of the sophomore year is a course of lectures during the junior year, and clinical diagnosis with examination of urine and blood in the senior year. Professor JOHNSTON.

7 (8). INFECTIOUS DISEASES. 1 hr.

Special attention is given to differential diagnosis. Students are taken in regular order to examine cases in the vicinity, and so obtain direct knowledge of patients suffering from this class of diseases. Junior year. Dr. MOOREHEAD.

9 (10). DISEASES OF THE DIGESTIVE TRACT. 1 hr.

Clinical demonstration with practice in lavage and analy-

*See note at bottom of page 111.

sis of stomach contents. Senior year. Professor JOHNSTON.

11 (12). DISEASES OF THE NERVOUS SYSTEM. 1 hr.

A course of lectures illustrated by charts and specimens from the pathological laboratory, supplemented by clinical instruction. Senior year. Professor JOHNSTON.

14. MEDICAL DIAGNOSIS.

A course reviewing the whole field previously gone over, but approaching the subject from the standpoint of the individual symptom and its possible significance in building up a diagnosis. Senior year. Professor JOHNSTON.

15 (16). HYDROTHERAPY AND MANUAL THERAPEUTICS.

A course of lectures upon the principles underlying these allied methods of cure with actual demonstration sufficient to enable the graduate to prescribe them intelligently.

Text-books: Cowperthwaite's *Practice*, Arnda's *Practice*, Goodno's *Practice*, Raue's *Special Pathology and Therapeutic Hints*, Talcot's *Mental and Nervous Diseases*, O'Connor's *Nervous Diseases*, Loomis' *Physical Diagnosis*, Bartlett's *Principles of Diagnosis*. Reference books: Osler's *Practice*, Anders' *Practice*.

17 (18). DERMATOLOGY.

1 hr.

One hour a week throughout the senior year is devoted to the study of the skin, its nature, structure, functions, diseases and treatment, including also drug eruptions and their relation to the pathological features of diseases of the skin.

The instruction in this branch is both by lectures and clinics, patients being assigned to members of the class for examinations, diagnosis, and treatment.

The lectures are illustrated by large color-plates and are supplemented by quizzes and recitations. Dr. MOORHEAD.

Text-books: Kippax's *Diseases of the Skin*, Dearborn's *Diseases of the Skin*.

Reference books: Piffard's *Diseases of the Skin*, Hyde's *The Skin*, *American Text-Book*.

SURGERY

PROFESSOR TITZELL; DR. COGSWELL, DR. JOHNSON

Sophomore Year—In this year a comprehensive course of

surgical dressings of all kinds, both temporary and permanent; care of instruments, minor surgical operations and catheterizations; full and complete course of instructions in aseptic technique and on surgical anæsthesia.

One hour a week during the two semesters. Dr. COGSWELL.

An additional hour weekly during the second semester. Dr. JOHNSON.

In the first semester the class will attend with the juniors for the study of fractures and dislocations, this subject being of such great practical value that it is thought best to carry on this instruction during two entire years. Sophomores are required to attend all general surgical clinics.

Text-books: Wharton's *Minor Surgery*, Hamilton's *Fractures and Dislocations*, Stimson's *Fractures*, Scudder's *Fractures*.

Juniors—A thorough course in emergency surgery is given during this year, two hours a week throughout both semesters. The first semester is devoted to an exhaustive course on fractures and dislocations, with frequent quizzes and written examinations on the different subjects. The second semester is devoted to orthopedic surgery and diseases of joints. The subjects of shock, hemorrhage, effects of heat and cold, contusions and wounds, together with regional traumatism, are discussed. Attendance upon all surgical clinics is required. Professor TITZELL.

Text-books: As above with the additions of, Bradford and Lovett's *Orthopedic Surgery*, Dacosta's *Modern Surgery*, Senn's *Principles of Surgery*.

Seniors—Two hours a week are given to lectures during the entire year. The cause, symptoms, and surgical pathology, as well as the treatment of the various surgical diseases of the different regions of the body, are presented in a practical manner. An attempt is made to carry on the work in a consecutive and systematic manner, giving special attention to homeopathic therapeutics in so far as they apply to the treatment of surgical cases. Operative surgery is taught by means of lectures in the first semester. Actual work on the cadaver, each student being required to do carefully and well a certain number of operations, follows in the second semester.

The principles of surgery and the technique of modern antiseptic surgery, are demonstrated throughout the year in the clinics. For this purpose material is always plentiful and at times more than can be utilized.

The clinical lectures, in which are demonstrated the various abdominal operations, amputations, resections, and every other variety of operation, are designed to be an essential part of this course, and for this reason attendance on all clinics, general and special, is obligatory.

Students in this year are required to write a thesis on some assigned topic and to defend their statements at meetings of the seminary, in which thesis is read. Professor TRZELL.

Text-books: *American Text-book of Surgery*, *International Text-book of Surgery*, Van Bergman's *System of Surgery*, Bryant's *Operative Surgery*.

OBSTETRICS AND GYNECOLOGY

PROFESSOR BECKER

In the department of obstetrics and gynecology, lectures and clinical demonstrations are combined with practical work by the student at the bedside and in the operating room, insuring a thorough knowledge of technique, diagnosis, and treatment.

OBSTETRICS

The department of obstetrics is supplied with ample clinical material to afford each student the opportunity of witnessing and assisting at a number of deliveries. The presence of the patients in the hospital several weeks before confinement gives an opportunity to study the conditions of pregnancy, its diagnosis, and its management.

Junior Year—This year is devoted to a review of the anatomy of the pelvis and generative organs and their physiological functions, the physiology of ovulation and gestation, the changes in the maternal organism due to pregnancy, the diagnosis and hygiene of pregnancy, and the management of normal labor.

Senior Year—During this year special attention is given to the pathological conditions of pregnancy, the causes and management of abortion and premature labor, the diagnosis and management of the various foetal presentations, the methods of performing version, the use of the obstetrical forceps, and the management of the puerperium and its pathological conditions.

During the second semester a practical course in the diagnosis and management of the various foetal presentations is given.

Text-books: Leavitt's *American Text-Book of Obstetrics*, Guernsey, Williams.

GYNECOLOGY

The clinical work in this department is arranged so as to give students the opportunity of examining patients for the purpose of diagnosis, and of assisting at operations in the clinics, thereby acquiring familiarity with the technique of examination and the treatment of the diseases and injuries peculiar to women.

Junior Year—This year is devoted to abnormalities in the development and functions of the sexual organs, including puberty, menstruation with its various pathological conditions, the climacteric, and inflammatory and other diseases usually coming under the head of medical gynecology.

Text-books: Wood, Minton's *Uterine Therapeutics*, Southwick.

Senior Year—This year is devoted to the study of the injuries of the genital tract, their results, treatment, and repair, displacements and their correction, and neoplasms of the genital tract, their results, treatment, and repair. Professor BECKER.

Text-books: Skene, Dudley, Kelley's *Operative Gynecology*.

PEDIATRICS

DR. HAZARD

Instruction in this department is given by lectures, quiz-

zes, and clinics. All the diseases pertaining to pediatrics are given due consideration, but special attention is bestowed upon infant-foods and feeding, the diseases of malnutrition, and acute exanthematous diseases.

Junior Year—In the second semester six lectures are given on the most important part of pediatrics, including nutrition and acute exanthematous diseases, thus preparing the student to understand in the senior year the clinical cases which have their origin in faulty infantile nutrition or in the sequelae of measles, scarlatina, etc.

Senior Year—One lecture each week during the year is given on this subject. The lectures are supplemented by hospital clinics. Whenever possible, students are put in charge of out-patients.

Text-books: Fisher, Tooker, Raue.

OPHTHALMOLOGY, OTOTOLOGY, RHINOLOGY, AND LARYNGOLOGY

PROFESSOR BYWATER

In this department all diseases of the eye, ear, nose, and throat are considered. For the practical study a commodious dark room, well supplied with all the necessary apparatus has been provided. Here patients are treated by the students under the supervision of the head of the department or of competent assistants. After the patient has been carefully and thoroughly examined in the clinic and the treatment has been outlined, he is put in charge of a student, who assists in the treatment, watching the progress of the case until the patient is discharged. In this way practical and valuable experience is gained. The student not only becomes familiar with the diseased conditions by being required to make diagnoses, but he also becomes acquainted with the use of the instruments used in the diagnosis and treatment of cases coming under this department.

The clinics are large, and there is sufficient clinical material so that the students have an opportunity of seeing operations on a large variety of eye, ear, nose, and throat cases.

OPHTHALMOLOGY

Seniors and Juniors—Lectures and recitations on the anatomy and physiology of the eye, diseases of the orbit and lachrymal apparatus, conjunctiva, sclera, cornea, and extrinsic muscles. One hour each week during the first semester.

Lectures and recitations on the internal diseases of the eye, including those of the ciliary body, iris, retina, choroid, optic nerve, lens, and vitreous body. Eye-strains, due to errors of refractions are also considered. One hour each week during the second semester.

Seniors, Juniors, and Sophomores—Clinics two hours each week during the year. Cases are assigned to students or examination, diagnosis, and treatment.

OTOLOGY

Seniors and Juniors—Lectures and recitations on the anatomy and physiology of the ear. All pathological conditions of the external, middle and internal ears, and of the mastoid process are considered. One hour each week during the first semester.

Seniors, Juniors, and Sophomores—Attendance upon clinics two hours each week is required. These clinics are held in connection with the general eye, ear, nose, and throat clinic.

RHINOLOGY AND LARYNGOLOGY

Seniors and Juniors—Lectures on the anatomy and physiology of the nose, throat, and all accessory sinuses. Consideration of diseases of the nose, naso-pharynx, larynx, frontal sinuses, antrum, ethmoid cells, etc. One hour each week during the second semester.

Seniors, Juniors, and Sophomores—Clinics two hours each week during the year in connection with the general clinic.

Seniors—Sub-clinic one hour each week during the year. Seniors are given practical instruction at stated periods throughout the year in the use of the ophthalmoscope, laryngoscope, rhinoscope, etc., as employed in the diagnosis of pathological conditions of the eye, ear, nose, and throat. The class is divided into sections for this work.

Text-books: for the eye—Norton, Buffum, MacBride, Noyes; for the ear—Winslow, Houghton, Hallett, and Dench; for the nose and throat—Ivins, Veshlage, Quay, Kyle, and Bishop.

SUMMARY OF COURSES

Freshman Year

Histology
Physiology
Anatomy
Chemistry, organic and analytic
Organon
Homeopathic pharmacy
Materia medica
Minor surgery

Sophomore Year

Physiology
Anatomy
Physiological chemistry
Pathology
Materia medica
Physical diagnosis
Surgical emergencies
Clinics

Junior Year

Toxicology
Rhinology and laryngology
Surgical emergencies—continued
Principles and practice of surgery
Theory and practice of medicine
Bacteriology
Obstetrics
Gynecology
Dermatology
Materia medica
Genito-urinary diseases
Clinics
Pediatrics
Hygiene
Electro therapeutics

Senior Year

Pediatrics

Ophthalmology and otology

Materia medica and therapeutics

Obstetrics—continued

Gynecology—continued

Principles and practice of surgery—continued

Theory and practice of medicine—continued

Medical jurisprudence

Insanity

Electricity

Venereal diseases

Clinics

Dietetics

**THE UNIVERSITY
HOMEOPATHIC HOSPITAL**

OFFICERS OF THE HOSPITAL

WILLIAM LECLAIRE BYWATER M. D.

Director

ALICE CATHERINE BEATLE, Graduate Nurse

**Superintendent of the Hospital, and Principal of the Nurses'
Training School**

GEORGE MOSBY

Interne

HERVEY FULTON MASSON

Interne

TRAINING SCHOOL FOR NURSES

The complete course of the training school for nurses covers three years.

Persons wishing to obtain the course of instruction must make a written application to the superintendent upon whose approval they will be received for three months on probation. During the term of probation the superintendent will decide as to their practical fitness for the work and, proving satisfactory, they will be enrolled as "first year nurses," having first agreed in writing over their signature, to remain in the school three years and to observe the rules and regulations of the hospital.

Applicants must not be under twenty nor more than thirty years of age and must have had at least one year of study in high school.

No compensation is paid during the probationary period but an allowance of \$5.00 a month is given during the remainder of the course.

Vacations are granted as follows: for first year nurses, two weeks; second year nurses, three weeks; third year nurses, four weeks. The time of such vacations is arranged by the superintendent and the director of the hospital.

COURSE OF TRAINING

The instruction includes:

Care of ward, ventilation, disinfection, medical and surgical nursing, etc.;

Administration of medicines, and the use of appliances;

General observation of the sick;

Keeping of reports and records;

Methods of observing and recording temperature, pulse,

and respiration;

First-aid in accidents;

Bandaging, and use of splints;

Care of orthopedic cases;

Care of gynecological patients;

Obstetrical nursing;

Care of infants;

Chemistry of food;

Modification of diet in diseases;

Cooking for invalids.

Nurses are given during the last year a general idea of the organization, equipment, and management of hospitals and training schools.

Aside from their practical work a regular course of class instruction is given by the superintendent, and lectures from the faculty on the following subjects; anatomy; eye, ear, nose, and throat; anæsthesia; materia medica; gynecology and obstetrics; contagious and infectious diseases; pediatrics.

Examinations are held at stated periods during the entire course.

Persons who complete the three-years course will receive a diploma signed by the President of the University, the Secretary of the Board of Regents, the Director, and the Superintendent of the Hospital.

The graduating exercises are held in connection with those of the University.

For further information, address ALICE C. BEATLE, Superintendent of the University Homeopathic Hospital, Iowa City, Iowa.

HOMEOPATHIC ALUMNI ASSOCIATION

The Alumni Association held its fourteenth annual meeting at Des Moines, May 9, 1907, at which time the following officers were elected:

President—F. J. Becker, M. D., Iowa City.

Vice President—C. M. Morford, M. D., Toledo.

Secretary and Treasurer—C. C. Cogswell, Jr., M. D., Cedar Rapids.

Executive Committee—President, Secretary and Treasurer.

Alumni are urged to send their names to the secretary for enrollment as members. A small admission fee is required the funds so procured to be devoted to the hospital. Alumni are requested to keep the secretary informed of change of address.

Further information may be obtained by addressing GEORGE E. MACLEAN, President of the University, Professor W. L. BYWATER, Vice-Dean of the Homeopathic College of Medicine, both of Iowa City, Iowa, or Professor GEORGE ROYAL, Dean of the Homeopathic College of Medicine, Des Moines, Iowa.

THE COLLEGE OF DENTISTRY

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.

PRESIDENT.

WILLIAM SUITS HOSFORD, B. A., D. D. S.

DEAN; Professor of Dental Prosthesis.

CHARLES CLEVELAND NUTTING, M. A.

**Professor and Head of the Department of Zoology, and Curator
of the Museum of Natural History.**

ELBERT WILLIAM ROCKWOOD, PH. D., M. D.

Professor and Head of the Department of Chemistry and Toxicology.

CHARLES SUMNER CHASE, M. A., M. D.

Professor of Materia Medica and Therapeutics.

FRANK THOMAS BREENE, D. D. S., M. D.

Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinic.

CHARLES NOBLE GREGORY, LL.D.

**Professor of Law, and Dean of the College of Law; Lecturer on
Dental Jurisprudence.**

ERNEST ALBERT ROGERS, D. D. S.

Professor of Regional Anatomy and Clinical Dentistry, and Superintendent of Clinics.

GEORGE VAN INGEN BROWN, D. D. S., M. D., C. M.

Professor of Dental Pathology and Oral Surgery.

JOHN THOMAS MCCLINTOCK, B. A., M. D.

Professor of Physiology.

HENRY ALBERT, M. S., M. D.

Professor of Pathology and Bacteriology.

HENRY JAMES PRENTISS, M. E., M. D.

Professor of Anatomy, and Director of the Histological Laboratory.

ROSCOE HENRY VOLLAND, D. D. S., M. D.

Assistant Professor of Operative Dentistry.

HENRY MORROW, D. D. S.

Assistant Professor of Prosthetic Dentistry.

SELSKAR MICHAEL GUNN, B. S.

Lecturer on Hygiene.

RICHARD SUMMA, D. D. S.

Special Lecturer in Orthodontia, in Charge of the Department of Orthodontia.

ANFIN EGDALL, B. S., M. D.

Instructor in Pathology and Bacteriology.

FREDERICK POMEROY LORD, A. B., M. D.

Demonstrator of Anatomy, and Assistant in Surgery.

WILLIAM EVERETT SPENCE, D. D. S.

Demonstrator in Prosthetic Dentistry and Orthodontia.

WALTER HENRY FOX, M. D.

Demonstrator in Anatomy, Histology, and Embryology.

CALVIN WALDO HARNED, D. D. S., M. D.

Demonstrator of Prosthetic Dentistry.

JOHN JOSEPH LAMBERT, M. S.

Instructor in Histology and Embryology.

CHARLES DELOS POORE, A. C.

Instructor in Chemistry.

JOHN VOS, D. D. S.

Demonstrator of Operative Dentistry.

FRED JAMES LONGWORTH, A. C.

Instructor in Chemistry.

RUDOLPH ERNST KLEINSORGE, B. S.

Assistant Instructor in Physiology.

ROE EUGENE REMINGTON, B. A.

Assistant Instructor in Chemistry.

GEORGE CLARK PELTON, D. D. S.

Assistant Demonstrator of Regional Anatomy and Clinical Dentistry.

ARTHUR DANIEL WOODS, M. D.

Assistant Demonstrator in Anatomy, Histology, and Embryology.

HELEN BASCHNAGEL.

Clerk.

JOSEPH MAXWELL CADWALLADER.

Senior Undergraduate Demonstrator in Anatomy, Histology, and Embryology.

IRA NELSON CROW.

Assistant in Histology and Embryology.

PAUL JOHN HANZLIK, PH. G.

Attendant in Chemistry.

WILLIAM GEORGE MCKAY, M. S.

Assistant in Pathology and Bacteriology.

DIEDRICH JANSSEN MEENTS, B. S.

Senior Assistant in Pathology and Bacteriology.

WILLIAM JOHN MORGAN, B. S.

Storekeeper in Chemistry.

JOHN THOMAS PADGHAM.

Undergraduate Assistant in Physiology.

ADELE AGNES RIES.

Assistant Clerk, College of Dentistry.

EDGAR FRANCIS SMITH.

Junior Undergraduate Demonstrator of Anatomy, Histology, and Embryology.

FREDERICK WILLIAM VALKENAAR.

Senior Assistant in Clinical Microscopy.

NELSON DREW WELLS, B. PH.

Tutor in Medical Latin.

GENERAL INFORMATION

ORGANIZATION

This college, which was first called the Dental Department, was organized in 1881 in response to an earnest request from representatives of the dental profession throughout the state, acting through the Iowa State Dental Society. The first session was held during the year 1882-1883. The college is a component part of the University and is located on the same campus with the other colleges. This gives the student the advantage of instruction in other departments and the use of the laboratories, libraries, and museums of the whole University, as well as acquaintance and close relations with the faculties and students of the several colleges of the institution.

The course in dentistry extends through three years of thirty-six weeks each, the years being divided into semesters of eighteen weeks each, and each semester into two quarters of nine weeks.

The method of instruction is by lectures, demonstrations, recitations, and the actual performance of both laboratory and clinical work by the student himself under the supervision of demonstrators. A systematic and thorough preliminary training is given through the technical work of the laboratories, fitting the student as far as possible for the practical work of the infirmary. The clinical material is abundant and of exceptional quality.

BUILDINGS

The HALL OF DENTISTRY is a large and modern stone-trimmed brick building, devoted exclusively to the use of the College of Dentistry. The building is well lighted throughout, and free from smoke and dust, permitting full use of the eyes without injury.

The laboratories have a large window at each table with lockers beneath for instruments. These laboratories have all the usual appliances, including electric lathes for polishing.

The lecture rooms are ample and seated with comfortable opera chairs.

The operating rooms are exceptionally well lighted, and are provided with Wilkerson and Columbia chairs, each having a fountain spittoon with saliva ejector, and a Harvard cabinet for instruments. Each chair is also provided with an overhead electric light for dark days or for unavoidably late work.

Porcelain work receives much attention and a number of porcelain furnaces of the latest pattern have been installed. Porcelain baking can be carried on at any time without inconvenience or delay. Such apparatus as electric cautery, root-driers, mouth-lamps, and gold annealers are also provided.

Each student in the college retains throughout the year his own locker and tables in the laboratories, his seat in the lecture rooms, and his chair and cabinet in the clinic rooms.

For description of the Hall of Anatomy, the General Medical Laboratories, and the University Hospital, see page 352.

DENTAL MUSEUM AND LIBRARY

The college museum comprises the celebrated Patrick collection, illustrating comparative dental anatomy, together with many other rare and valuable specimens. Additions to the museum are being made constantly.

The special library of dental and surgical works is maintained in the building. Dental students have also all the privileges of the general library of the University.

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum specimens of malformation, normal, or diseased conditions, which will serve for illustration of dental teaching; also to the library books, pamphlets, journals, or other publications on dental subjects. Such contributions will be labelled with the donor's name and preserved carefully.

NATIONAL ASSOCIATION

The College of Dentistry is on the recognized list of the National Association of Dental Examiners. The diploma of the College of Dentistry is legally recognized in every state of the United States, and in every foreign country where an American diploma confers any legal rights or privileges.

PRACTITIONERS' COURSE

This course is planned for the convenience and benefit of practitioners. The studies in the course are purely elective, as are the methods in practical work that may be pursued. The curriculum is arranged more especially to give a thorough course in the treatment of pulp and abscesses or other pathological conditions of the oral cavity. Detailed instruction is given in bridge and crown work, continuous gum dentures, porcelain fillings, and the methods of working metals, by all the different operations which the practitioner is called upon to perform.

A full corps of demonstrators in all subjects provides instruction in this course, and the service of several additional clinical specialists is obtained during the session.

Any one in reputable practice may enter this course. Alumni of this college are exempt from all but the usual laboratory deposits and fees. Graduates of other dental schools of like rank must pay these deposits and fees and the regular matriculation fee. For rates see under TUITION.

Other graduate work as in porcelain, orthodontia, etc., may be provided upon application to the faculty.

DENTAL ASSISTANTS' COURSE

The course of the training school for dental assistants extends through the regular dental year of thirty-six weeks. The fee for tuition is \$15.00 of which \$7.50 is payable upon registration, the balance at the opening of the second semester. Students who have not previously matriculated will pay the regular matriculation fee of \$10.00. Candidates for admission to this course must possess a common school education, and

must present two letters of recommendation as to their capabilities, qualifications and moral character. No other examination for admission is required. This course consists of both lectures and practice, thorough instruction being given in operative and prosthetic technique, therapeutics, pathology, and dental anatomy: Special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory, are offered.

An important additional feature of this course will be the special training of women to perform the duties of dental assistant nurses.

Credits obtained in this course will be allowed to those who desire to complete the regular dental course, providing the requirements are fulfilled as provided for that course.

TUITION AND EXPENSES

For tuition and expenses see pages 72 ff.

REGISTRATION

Seats are assigned to students in the order of their registration.

Operating-chairs are assigned to members of the senior class in the order of their registration, but this privilege is forfeited if the student is not in attendance at the opening of the session.

Promptness at the beginning of the term is essential, and students must be present the first day of the session.

ADMISSION, STANDING, AND DEGREES

ADMISSION

1. Each applicant for admission must present to the secretary of the faculty satisfactory evidence of good moral character.

2. The following classes of applicants may be admitted without examination.

a. Graduates or matriculates of reputable universities or colleges who present diplomas or certificates of honorable dismissal from such universities or colleges.

b. Graduates of normal schools established by state authority who present diplomas or certificates of graduation.

c. Graduates of accredited secondary schools who present twenty-four preparatory credits.* These preparatory-credits must be properly certified by the superintendent or the principal of the school from which the applicant comes, on a blank form which can be obtained by addressing the president of the University, or the University examiner. This certificate should be sent to the University examiner *as early in the summer as possible*.

3. In September, 1907, applicants who do not present credentials as described above will be admitted without conditions *only upon passing examinations* in the preparatory subjects named in the program of entrance examinations given below. Any applicant may offer himself for entrance examinations in other preparatory subjects than those named in the program if, in the judgment of the University examiner, these are real equivalents of those named in the program.

4. Applicants who present proper *certificates* covering all or any part of the preparatory studies designated under paragraph 3 for examination, may be admitted upon passing

*In estimating the amount of work required for admission, a *preparatory credit* is regarded as the equivalent of one study daily for a semester of eighteen weeks on the basis of four studies a day; thus eight credits stand for a normal year's work.

examinations in enough *other* preparatory studies to bring the number of their preparatory-credits up to twenty-four.

5. Students entering from other colleges of dentistry with advanced standing must present credentials for preparatory work or be examined as stated above.

6. Any one who expects to enter the College of Dentistry in September is urged to send all certificates of preparatory work to the University examiner *as early in the summer as possible, and certainly before September 1*. If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the secretary of the board of regents, room 101, Old Capitol.

The above requirements for admission are in strict accord with all the rules and regulations of the National Association of Dental Examiners, and those of the Iowa and Illinois Boards of State Dental Examiners.

PROGRAM OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Wednesday, September 18 to Saturday, September 21, 1907

Latin,	2 credits,	Thursday,	10:00 A. M.
English and			
English Grammar,	2 credits,	Thursday,	1:30 P. M.
U. S. History,	1 credit,	Friday,	9:00 A. M.
Algebra, through			
Quadratics,	3 credits,	Friday,	1:30 P. M.
Physics,	2 credits,	Saturday,	8:00 A. M.
Botany,	1 credit,	Saturday,	9:30 A. M.
Arithmetic,	1 credit,	Saturday,	1:30 P. M.

SECOND SEMESTER

The examinations will be held between Thursday, February 6 and Saturday, February 8, 1908, according to a program which will be posted by the University examiner before the close of the first semester.

For *each separate* examination given at any other time than that announced in the foregoing programs, a fee of *one*

dollar will be charged by the University. For a *series* of examinations covering two or more subjects a fee of *two dollars* will be charged.

Any person expecting to enter the College of Dentistry in September, should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the University examiner.

Each applicant who is to be examined must arrive in the city early enough to be present *at his first examination as indicated in the programs given*. He should present himself at once at the office of the University examiner, who will give him all necessary directions.

ADMISSION TO ADVANCED STANDING

Attendance on any course of lectures in other recognized dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this college. Graduates of medical colleges will be required to attend two full years of instruction in this college, including all laboratory and clinical requirements, and all lectures, before applying for graduation.

EXAMINATIONS FOR REMOVAL OF DEFICIENCIES

All students will be required to pass examinations on the studies pursued in their respective courses before leaving the University at the close of the year. In case of failure to pass any of these examinations the student must be *re-examined before registration* at the opening of the next session. A failure in two or more branches at the September examination will debar the student from admission to a higher class.

All students having deficiencies in their dental work must appear for examination according to the following schedule:

FRIDAY, SEPTEMBER 20

Dental anatomy,	9 A. M.	Dental pathology,	2 P. M.
Operative dentistry,	10 A. M.	Orthodontia,	3 P. M.
Prosthetic dentistry,	11 A. M.		

SATURDAY, SEPTEMBER 21

Histology,	8 A. M.	Anatomy,	11 A. M.
Physiology,	9 A. M.	Materia medica,	3 P. M.
Pathology,	10 A. M.	Chemistry,	4 P. M.

DEGREE OF DOCTOR OF DENTISTRY

The candidate for graduation must be of legal age and of good moral character; must present to the faculty a satisfactory case of artificial dentistry, and the required clinical record of practical operations on the natural teeth; must pass a satisfactory examination in the branches taught; and must prove his general fitness for the practice of dentistry. His time of study must include attendance on three courses of lectures, the last of which must be at this college. His deportment during the course must have been satisfactory and attendance upon all lectures, clinics, and other instruction in the course must have been in accord with the requirements of the college.

Members of the senior class must notify the dean of the faculty in writing during the second week of April of their intention of becoming applicants for the degree of Doctor of Dental Surgery. Every senior must be present at commencement exercises unless excused by the president of the University.

COMBINED COURSES

For outline of combined course leading to the degree of B. S. and D. D. S. see pages 107, 108; for requirements for admission see page 361.

COMBINED COURSE LEADING TO THE DEGREES OF M. D.
AND D. D. S.

Students may arrange to obtain the degrees of Doctor of Medicine and Doctor of Dental Surgery in six years. Details must be arranged by the faculty.

If the student desires to combine the dental work with the work of either the College of Medicine or of the College of Homeopathic Medicine he must present thirty preparatory credits to meet the requirements of these colleges. 1

COURSES OF INSTRUCTION

OPERATIVE DENTISTRY AND DENTAL THERAPEUTICS

PROFESSOR BREENE; ASSISTANT PROFESSOR VOLLAND,
DR. VOS

The course in operative dentistry, including operative technique and dental anatomy, extends through the freshman, junior, and senior years. The clinical facilities for instruction in this department give the student an opportunity to receive thorough drill of a practical kind. Instruction in detail in all operations upon the teeth is given in the technical laboratory, in the infirmary, and in the lecture room.

The course in operative technique is supplementary to the lectures and laboratory work in dental anatomy of the freshman year, and is a preliminary training for clinical dentistry procedure.

Each student carves from bone or celluloid blocks a number of teeth, which are mounted in dummy jaws. The student is required to prepare cavities in these teeth for insertion of fillings, following the modern methods of cavity preparation.

Fillings of gold, amalgam, cement, and guttapercha, also inlays of gold and porcelain, are introduced in cavities formed. Special attention is given to restoration of type and contact in relation to approximation and apposition. Thus the objective results (functional improvement) are fully demonstrated.

***1 (2). LECTURE COURSE. 3 hrs.**

The lectures comprise the following subjects: history of dentistry, care of patients, examination of teeth, use and disinfection of instruments and other appliances, removal of deposits and cleaning of the teeth, general hygiene of the mouth, methods of securing separation of teeth, preparation of cavities, selection and characteristics of filling materials, inlays—gold and porcelain. Junior and senior years. Professor BREENE.

***3. LABORATORY TECHNIQUE. 4 hrs.**

In the laboratory work each student is required to carve from blocks of bone teeth of each class, incisors, cuspids, bicuspids, and molars, and to mount them in models on an articulator; to make freehand drawings of the individual teeth; to make various dissections of the natural teeth for the study of the pulp-chambers and root-canals. Freshman year. Four laboratory periods each week. Assistant Professor VOLLAND.

4. INSTRUMENTATION. 2 hrs.

Instrument nomenclature; instrument making; study of enamel cleavage and the cutting of tooth structure, using extracted teeth. Freshman year. Two laboratory periods each week. Assistant Professor VOLLAND.

5. CAVITY PREPARATION AND FILLING. 4 hrs.

Study of filling materials and appliances used in operative work; preparation of cavities and insertion of fillings; study of pulp-chambers and canals, and insertion of root-canal fillings. Junior year. Four laboratory periods each week. Assistant Professor VOLLAND.

7 (8). DENTAL ANATOMY LECTURES. 1 hr.

Throughout the year a course of lectures is given which is supplemented by the course in laboratory technique. A detailed study of the surfaces, markings, development, occlusion, pulp-cavities, and abnormal formations of teeth constitutes the course. The student's attention is especially directed toward an understanding and application of the practical principles of tooth-form and occlusion. The student makes free hand drawings of teeth and pulp-cavities as discussed. A large se-

*See note at bottom of page 111.

lection of specimens, charts, models, and lantern-slides is used to illustrate the lectures. Freshman year. Assistant Professor VOLLAND.

PROSTHETIC DENTISTRY

PROFESSOR HOSFORD; ASSISTANT PROFESSOR MORROW, DR. SPENCE, DR. HARNED

The work of this department is given as a graded course extending through the freshman, junior, and senior years and is divided into technical, lecture, and clinical courses.

*1. FRESHMAN PROSTHETIC DENTISTRY.

A lecture and laboratory course, including the principles and methods of taking impressions, and pouring models; the making of dies and counter dies; the making of different styles of dentures on bases of vulcanite, aluminum, and gold-ine; vulcanizing, repairing, and finishing of cases made. Laboratory work nine hours a week. Assistant Professor MORROW.

2. FRESHMAN PROSTHETIC DENTISTRY.

A lecture and laboratory course, including all the practical steps in the making of a full upper and lower denture; the practical study of articulation, occlusion, and the selection and arrangement of the teeth.

Crown Work—Preparation of the roots of extracted teeth for bands, fitting bands, carving cusps in plaster and other materials, making dies, swaging cusps, soldering and finishing crowns. This course includes the different methods of making shell and porcelain crowns. Laboratory work nine hours a week; one lecture a week. Assistant Professor MORROW.

3. JUNIOR PROSTHETIC DENTISTRY.

A lecture and laboratory course, embracing the principles of making various kinds of crowns and bridges and their application on models secured from practical cases. The laboratory work includes the making of porcelain crowns, with the manipulation of porcelain, the use of electric and gasoline furnaces, and the baking of different porcelains.

Laboratory periods twelve hours a week; one lecture a week. Assistant Professor MORROW; Dr. HARNED.

*See note at bottom of page 111.

4. JUNIOR PROSTHETIC DENTISTRY.

The work of the second semester consists of clinical practice in applying the principles and methods taught in the lecture and laboratory work of the first and second years. This practical course is broadened by the lectures on the clinical work of the students. Infirmary, twenty-seven hours each week; one lecture a week. Professor HOSFORD; Dr. SPENCE; Dr. HARNED.

5 (6). SENIOR PROSTHETIC DENTISTRY. 3 hrs.

A lecture, recitation, and clinical course for senior students. Each student is required to perform a certain amount of prosthetic work in the infirmary, to prove his or her efficiency in this subject. Two lectures and one recitation each week. Twenty-seven hours each week in infirmary. Professor HOSFORD; Dr. SPENCE.

ORAL PATHOLOGY, SURGERY, AND HYGIENE

PROFESSOR BROWN

ORAL SURGERY

Operative, therapeutic, and mechanical treatment of diseases and deformities of the mouth, face, and jaws is considered with careful distinction between affections best suited for reference to dentists, medical practitioners, and general or oral surgeons.

The divisions and special features of the courses of study in this department are as follows:

Junior Students

a. General considerations—Health, disease, pulse, respiration, conditions favorable and unfavorable to operation, shock, asepsis, preparation of patient for operation, care of hands, instruments, dressings, etc.

b. Wounds—Varieties and treatment, bandages, dressings, processes of tissue repair; hemorrhage, different forms and methods of checking.

c. Ligatures and sutures—Various materials used, methods of preparation and application.

d. Surgical aspect of inflammation, suppuration, abscess, ulcer, necrosis, caries, gangrene.

e. Aseptic fever, septic fever, septicemia, pyemia; pernicious anemia, leucothemia, digestive and nutritive disturbances.

f. Erysipelas, tetanus.

g. Diseases of the mucous membrane—Stomatitis, leucoplacia, gangrena oris, specific disease, mucous cysts, etc.

Senior Students

a. Review of subjects treated in the junior year.

b. Study of differential diagnosis through which the true etiologic factors of many more or less obscure pathologic conditions may often be determined. Frequently these are found to have their origin in oral disturbances not difficult to relieve.

c. Affections of the maxillae—Periostitis, necrosis, actinomyces, tuberculosis, syphilis, fractures, dislocation, ankylosis, diseases of the maxillary sinus.

d. Diseases of the salivary glands—Parotitis, ptyalism, inflammatory conditions due to colculi, fistulae, ranula.

e. Neuralgia, epilepsy, muscular spasm, paralysis, neurasthenia, and other neuroses related to tri-facial defects.

f. Hare-lips, cleft palate, and speech defects.

g. Tumors—Practical study of the most common malignant and non-malignant growths which affect the jaws and mouth.

All of the foregoing pathologic conditions are comprehended within the special field to which the practice of the instructor is limited. Blood counts, microscopic sections of tissue, tumors, and other data necessary for illustration and reference have been preserved from patients treated, giving the student more benefit than he would derive from books alone.

Large numbers of casts of mouths of patients from the newly born to persons adult and middle life who have congenital or acquired clefts of both hard and soft palates, hare-lip deformities, double and single in almost every degree, as well as photographs and phonographic speech records before and after operative treatment are used to convey correct ideas of the possibilities and limitations in this direction.

ORAL SURGICAL CLINICS

The oral surgical operating room in the College of Dentistry is fully equipped with appliances for the performance of the oral surgical operations that dentists may be trained to do advantageously in their own offices. A considerable variety of diseased conditions require treatment of this character. Students become familiar with their clinical diagnosis and operative treatment much better in this way than if attempted under the unfavorable surroundings of the dental operatory, or in a hospital where closer study might be precluded.

In the surgical amphitheater and operating room of the University Hospital are performed special clinics for the dental students upon hare-lip and cleft palate cases, for the removal of malignant growths, of empyema of the maxillary sinus, of necrosis of the jaws, and of impacted malposed third molars, or for other similar operations of such degree as to require extensive radical operations which can be performed best in a hospital under conditions of greater safety to patients. To be able to distinguish between cases and to know those that are most suitable for treatment under one or the other of the two classes recognized in this division is a first essential to modern dental practice.

In connection with this work clinical demonstrations and instruction are also given in the administration of anaesthetics and in methods of physical diagnosis that are legally and otherwise essential to the proper undertaking of surgical operations.

ORAL PATHOLOGY

The importance of this study is brought directly to the members of the class through illustration with microphotographs prepared for use in the stereopticon, and with microscopical sections showing pathological changes in the histological structure of the organs and tissues within or intimately associated with the special operative field of dental and oral surgery. Many of these have been taken from cases of known history and are therefore calculated to impress the practical

features of the subject. Skiagraphs, charts, and drawings are used to supplement lectures and clinical study of patients.

DISEASES OF THE DENTAL ORGANS

Teeth—Perversions of eruptive developmental processes; dental caries, erosions and abrasion, discoloration.

Dental pulp-hyperemia, pulpitis, devitalization, gangrene, secondary dentine, pulp modules, calcareous degeneration, polypi.

Pericementum—Gingival and calcic inflammations, pericementitis, dento-alveolar abcess, pyorrhea, alveolaris, hypercementosis, absorption of roots of permanent teeth. Pathological conditions of other organs and tissue of the mouth and jaws will be treated in the order outlined in the course in oral surgery.

ORAL HYGIENE

Prophylaxis in relation to healthful preservation of the dental organs and tissues of the mouth, antiseptic mouth washes, tooth powders, resistance of oral secretions to germicidal agents and subsequent difficulty in overcoming mouth bacteria, brushes, etc., will be given full consideration, as well as ample illustration.

The purpose of further clinics and lectures is to establish as the basal principles of the course the fact that care of the buccal cavity is properly an essential part of all sanitation. The frequent intimate relation between pathological affections of the eye, ear, nose, throat, and the stomach and diseases of the mouth, as well as disorders of the nervous and circulatory systems having similar associations, are studied fully with a view to effective prevention of disease, whether local or general in its manifestation.

ORTHODONTIA

DR. SUMMA; DR. SPENCE

The work in orthodontia continues during the entire course

being strictly graded and progressive throughout. All practical work is under the direct supervision of the instructors in charge. The supply of clinical material is always more than can be used, allowing selection of suitable cases.

***2. FRESHMAN WORK.**

Lectures on the basic principles of orthodontia, occlusion, and training in the technique of plaster of paris impressions and the making of plaster of paris models.

4. JUNIOR WORK.

Continuation of the plaster of paris technique and a systematic treatment of orthodontic soldering technique.

Lectures on the origin, development, and growth of the tissues involved in the correction of mal-occlusion.

6. SENIOR WORK.

Review and continuation of the work of freshman and junior years, with practical application of principles studied.

CLINICAL DENTISTRY AND REGIONAL ANATOMY

PROFESSOR ROGERS

The instruction in this department is given by means of lectures, recitations, and special clinics.

***1 (2). PROFESSIONAL RELATIONS; CLINICAL DENTISTRY. 1 hr.**

The lectures treat of the professional relation which should exist between the practitioner and his patients and all matters which tend toward success in the dental profession. Among the subjects discussed are the following: location, equipment of an office, securing of patronage, ethics, management of patients, personal habits, business methods, fees, credit, collections, citizenship, etc.

The special clinics which are given from time to time afford the students opportunity for seeing and diagnosing the more difficult cases. The large number of cases which may be selected from the infirmary give excellent advantages along this line. Senior year.

*See note at bottom of page 111.

3 (4a). REGIONAL ANATOMY.

1 hr.

Lectures and recitations. The instruction in regional anatomy is supplementary to that in general anatomy. It includes a thorough study of the bones, muscles, bloodvessels, and nerves of the head and face, especially those intimately associated with the physiology and pathology of the dental organs. Lectures on blood and nerve supply to the teeth are illustrated by the stereopticon. Other lectures are illustrated by maps, charts, and models, and by well prepared specimens of the head, jaws, teeth, and nerves *in situ*.

Senior year.

ANATOMY

PROFESSOR PRENTISS; DR. LORD, DR. FOX, DR. WOODS, MR. CADWALLADER, MR. SMITH

Freshman Work—The class on entrance is divided into three sections to accommodate itself to the three natural divisions of the body; head and neck, upper extremity and thorax, and lower extremity and abdomen. Each third of the class is assigned to one of the parts of the body, receiving for study the bones of that part. For one-sixth of the year demonstrations are given on the osteology and arthology of that part; the following sixth of the year being devoted to the study of the soft parts, including the muscles, nerves, and arteries.

The sections then take up respectively the next third of the body, until at the end of the year the entire body has been considered by each student. Lectures and quizzes enlarge upon the course.

Junior Work—The class studies the viscera of the body, including the brain, thoracic viscera, and abdominal viscera, by means of lectures and quizzes. Special lectures and demonstrations are given to the class on the bones of the head, accessory sinuses, cranial nerves, blood supply of the head, etc., etc.

During the course in anatomy the students are required to make a dissection of the head and neck and extremity.

At the end of each year a practical and theoretical examination for advanced standing is held upon the work covered.

PHYSIOLOGY

PROFESSOR MCCLINTOCK; MR. KLEINSORGE, MR. PADGHAM

The work in physiology is given during the first two years of the dental course and consists of a graded course of lectures which are profusely illustrated by use of projection apparatus and by numerous demonstrations and practical experiments. Recitations are held each week, covering the lecture work, the class being divided into small sections so as to insure individual work.

For description of courses see 1a to 4a and 9 (10), pages 366, 367.

CHEMISTRY AND METALLURGY

PROFESSOR ROCKWOOD; MR. POORE, MR. REMINGTON, MR. LONGWORTH

*7 (8). GENERAL CHEMISTRY. 3 hrs.

Lectures and recitations, in which the principles of the science are considered as well as its technical applications. The chemistry of both non-metals and metals is included. Freshman year. Mr. REMINGTON.

29b (30). ANALYTICAL CHEMISTRY.

A laboratory course, the object of which is to familiarize the student with chemical manipulations and the properties of the most important metallic compounds. Freshman year, 5 laboratory hours a week. Mr. POORE; Mr. REMINGTON.

15a. DENTAL METALLURGY. 3 hrs.

The lectures treat of the separation of the metals from their ores, their refining, and the properties of those most used in dentistry, also the preparation, properties and methods of working dental alloys, including the nature, manufacture and testing of amalgams. Junior year. Mr. LONGWORTH.

17a. PRACTICAL DENTAL METALLURGY.

This consists of the laboratory study of the metals most commonly used in dentistry, their physical properties and chemical changes, particularly those produced by the action of

*See note at bottom of page 111.

heat. Junior year. Five laboratory hours a week. Mr. POORE;
Mr. REMINGTON.

DENTAL MATERIA MEDICA AND THERAPEUTICS

PROFESSOR CHASE; PROFESSOR BREENE, DR. MCGREGOR, MR.
WELLS, MR. GUNN

For description of courses 1 and 2 see page 373.

3 (4). PHARMACOLOGY.

In order to familiarize the student with the action of the more important drugs used in his profession a demonstration course in pharmacology will be given during the junior year. Dr. MCGREGOR.

5 (6). DENTAL THERAPEUTICS.

1 hr.

Members of the senior class are given a special course in dental therapeutics, by presenting drugs which are of special use to the practicing dentist.

This course is a review of the work given in the junior year, with special instruction in clinical dental therapeutics.

The application and prescribing of remedies for the prevention as well as the cure of diseased conditions is demonstrated by the instructors in charge of the infirmary.

Senior year. One lecture each week, with recitations. Professor BREENE.

For description of courses 13(14) and 18 see pages 374 to 376.

HISTOLOGY AND EMBRYOLOGY

PROFESSOR PRENTISS; DR. FOX, DR. WOODS, MR. LAMBERT,
MR. CROW, MR. LEIGHTON, MR. WARD

For description of equipment of the department see pages 370, 371.

The study of histology is considered first in connection with the subject of gross anatomy, in connection with which the microscopic considerations are treated. Epithelial cells, connective tissues, muscle cells, and nerve cells are studied

preliminary to their recognition in the general tissues. The microscopy of the digestive tract is then considered, the treatment covering the alimentary canal, its diverticula (liver, pancreas, and salivary gland), the ductless glands originating in the alimentary canal, and the respiratory tract. The buccal cavity and the pharynx are considered especially, and the adult and developing teeth are studied in detail, including the enamel organ. Next are considered the ductless glands other than those developing from the alimentary canal, the genito-urinary system, and finally the integumentary structures.

Two lectures and one quiz a week for each student. Professor PRENTISS; Dr. HOOVER.

Laboratory work four hours a week. Professor PRENTISS; Mr. LAMBERT; Dr. FOX; Dr. WOODS.

The course is concluded with a slide-examination on the tissues studied.

PATHOLOGY AND BACTERIOLOGY

PROFESSOR ALBERT; DR. EGDAHL, MR. MEENTS, MR. VALKENAAR
MR. MCKAY

For description of the equipment of the department and a general outline of the work see pages 376, 377.

*5. BACTERIOLOGY. 3 hrs.

A lecture, recitation, and laboratory course, which includes the preparation of artificial culture-media, the cultivation of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different micro-organisms, especially those related to the various infectious disease processes.

Special attention is given to the micro-organisms of the buccal cavity and their relation to the various infectious processes of adjacent tissue Junior year. Professor ALBERT; Dr. EGDAHL; Mr. MCKAY.

6a. GENERAL PATHOLOGY. 1 hr.

A lecture, recitation, demonstration, and laboratory course including the etiological factors in disease processes, the disturbances of circulation and nutrition, inflammation, atrophy,

*See note at bottom of page 111.

degeneration, infiltration, necrosis, hypertrophy, tumor formation and allied subjects. Junior year. Professor ALBERT; Dr. EGDAHL; Mr. MCKAY.

COMPARATIVE ODONTOGRAPHY

PROFESSOR NUTTING

A general view of the dental organs of animals affords many points of practical interest to the dental student, and throws light on some perplexing questions that arise in connection with peculiarities of the human teeth. Such a view is afforded by this course of lectures. Particular attention is paid to the various mechanical contrivances by which Nature has met special dental problems. In addition to this general discussion of the teeth of animals, some attention is paid to the embryology and histology of these organs. A special feature of the course is a demonstration, by means of projection of lantern-slides, of some obscure points regarding the vascular supply of the teeth and peridental membrane. This is made possible by means of a series of preparations by which sections of teeth, including the pulp and other soft structures, are made without decalcification.

The course is amply illustrated by specimens from the natural history museum, charts, and lantern-slides.

Senior year; second semester.

DENTAL JURISPRUDENCE

PROFESSOR GREGORY

The state law regulating the practice of dentistry is discussed. The general principles of legal liability are explained and suggestions are made as to the legal rights of the practitioner with reference to his compensation.

SCHEDULE OF STUDIES

A tentative curriculum for the three-year course of instruction is given here subject to such modification as may

seem expedient. Figures in parenthesis indicate the semester.

FRESHMAN YEAR

Anatomy	Histological laboratory
Dissection (1)	Medical Latin (optional)
Physiology	Dental anatomy
Chemistry	Prosthetic technique
Chemical laboratory	Operative technique (1)
Histology	Orthodontia technique

JUNIOR YEAR

Anatomy	Operative dentistry
Dissection	Prosthetic technique (1)
Physiology	Prosthetic technique
Materia medica	Porcelain technique
Special therapeutics (2)	Orthodontia technique
Metallurgy (1)	Infirmery (2)
Metallurgical laboratory (1)	Bacteriology (1)
General pathology (2)	Oral pathology (1)
Operative technique	Infirmery (2)

SENIOR YEAR

Operative dentistry	Oral surgery
Prosthetic dentistry	Comparative odontography (2)
Clinical dentistry	Physical diagnosis (2)
Orthodontia	Hygiene
Regional anatomy	Dental jurisprudence (2)
Special therapeutics	Special lectures
Oral pathology	Infirmery

TEXT-BOOKS AND BOOKS OF REFERENCE

These can be obtained at the book stores in Iowa City at a discount of from ten to twenty per cent. The following are recommended by the faculty:

Operative Dentistry—*American Text-book of Operative Dentistry*, Johnson's *Principles and Practice of Filling Teeth*.

Prosthetic Dentistry—Turner's *Prosthetic Dentistry*, Richardson's *Mechanical Dentistry*, Evan's *Artificial Crown and Bridge Work*.

General Pathology—Green, Stengel, Zeigler, Delafield, Pruden.

Bacteriology—Abbott, Crookshank, McFarland.

Histology—Piersol, Schaefer, Stirling, Klein.

Oral Pathology and Hygiene—Talbot's *Interstitial Gingivitis*, Green, Garretson's *Oral Surgery*, Wilson's *Hygiene*, Marshall's *Diseases of Face, Mouth, and Jaws*, Barrett's *Oral Surgery*, Burchard's *Dental Pathology*, Stengel's *A Text-book of Pathology*, McConnell's *A Manual of Pathology*.

Chemistry—General chemistry: Bloxam, Remsen; Qualitative analysis: Rockwood; Metallurgy: Essig, Hodgen.

Materia Medica—White and Wilcox, Potter.

Therapeutics—Gorgas, Hare, Long.

Dental Therapeutics—Gorgas, Long, Borland.

Anatomy—Cunningham, Gray (13th edition), Holden's *Landmarks*, Quain (10th edition), Holden's *Osteology*, McClellan's *Regional Anatomy*, Treve's *Applied Anatomy*.

Physiology—Landois and Sterling, Kirk, Stewart.

Orthodontia—Angle, Guilford.

Dental Anatomy—Black, Broomell.

Dictionaries—Dorland, Harris, Dunglison, Thomas, Gould.

INSTRUMENTS AND MATERIAL

REQUIRED BY FRESHMEN

The full list is absolutely required of every student. Instrument numbers according to S. S. White's or Marshall Mfg. Co.'s catalogue.

- 1 pair each C. and B. shears, curved and straight, No. 6.
- 1 pair curved crown shears, No. 11.
- 1 each ivory chisels, right and left.
- 1 pair collar pliers, No. 118.
- 1 pair contouring pliers, No. 115.
- 1 horn mallet, straight.
- 1 riveting hammer, B.
- 1 mouth blow-pipe, 12-inch, nickel plated.
- 3 pairs solder tweezers, B. C. and E.
- 1 4-inch half round plate file, cut No. 2.
- 1 4-inch half round plate file, cut No. 4.
- 1 4-inch round plate file, cut No. 2.
- 1 6-inch flat plate file, cut No. 3.

- 1 each 6 and 10-inch mill cut files.
- 1 double end half round vulcanite file, 8-inch.
- 1 round vulcanite file, 4-inch.
- 1 mechanical saw frame.
- 1 dozen assorted saws.
- 1 wax spatula No. 2.
- 1 plaster spatula No. 17.
- 1 each Kingsley finishers, Nos. 1 and 3.
- 1 enamel chisel No. 4.
- 1 each ivory chisels, right and left.
- 1 articulator, Bonwill or Gritman.
- 1 plaster bowl, B.
- 1 each upper impression trays, Nos. 21, 22, 23, Angle's pattern, and Nos. 2, 3, 12, regular patterns.
- 1 each lower impression trays Nos. 24, 25, 26, Angle's pattern, and Nos. 3, 11, 15, regular patterns.
- $\frac{1}{2}$ pound yellow wax, for base plates.
- $\frac{1}{2}$ pound modeling composition, No. 2.
- Whitney flask, iron
- 1 flask wrench
- 4 pounds babbit metal, Haskells' formula.
- 4 pounds counter-die metal.
- 1 Bailey moulding flask, large.
- 1 spool binding wire, small.
- 1 pin punch, nickel plated.
- 1 crown anvil.
- 1 small bench vise, detachable.
- 1 pound box powdered pumice stone.
- 1 pound box prepared chalk.
- 3 sheets sandpaper, Nos. 00, $\frac{1}{2}$, 1.
- 1 felt wheel, No. 2, round edge.
- 1 felt wheel No. 2, knife edge.
- 1 felt wheel, No 0.
- 1 felt cone, small, pointed, $\frac{3}{4}$ -inch diameter.
- 1 felt cone, pointed, 1-inch diameter.
- 1 each brush wheels, Nos. 28, 77, 80.
- 1 carborundum wheel, square edge stump, medium grit, $\frac{3}{8}$ -inch diameter, $\frac{1}{8}$ -inch thick, mounted on mandrel, No. 803.
- 1 Bunsen burner, Franklin Educational Co.'s No. 291.
- 10 inches $\frac{1}{4}$ -inch rubber tubing.
- 1 borax slate.
- 1 common whetstone.
- 1 box Sam's soldering flux.
- 1 asbestos soldering block, with handle.
- 1 Melott's moldine outfit.
- 1 stick rouge.
- 2 ounces shellac varnish, with brush.
- 2 ounces collodion, with brush.
- 2 ounces Elliott's parting fluid, with brush.
- 1 Colton file cleaner.

- 1 Boley millimeter guage.
- 1 Reeses' crown soldering tweezers.
- 1 copper ladle, 3-inch.
- (Probable cost, about \$33.00).

REQUIRED BY JUNIORS AND SENIORS

- 1 each S. U. I. amalgam instruments, Nos. 2, 3, 4.
- 1 each Arrington amalgam instruments, Nos. 8, 9.
- 1 set each Blacks excavators and chisels, Nos. 2, 4, 5, 11, 14, 20, 22, 23, 26, 27, 33, 40, 44, 46, 51, 52, 53, 54, 63, 64, 65, 66, 73, 74, 79, 80, 82, 83, 84, 85, 86, 87, 88, 89, 93.
- 1 broach holder.
- $\frac{1}{2}$ dozen Young broaches, extra fine.
- $\frac{1}{2}$ dozen Young Aseptic broaches, assorted.
- $\frac{1}{2}$ dozen Donaldson's pulp canal cleaners, No. 4.
- $\frac{1}{2}$ dozen Kerr's universal broaches, assorted.
- 1 flexible spring canal plugger, No. 3.
- 1 each scaler, Nos. 1, 3, 62.
- 1 explorer, No. 3.
- 1 each Allport's pyorrhoæa instruments, Nos. 4, 6, 7, 14, 15.
- 1 each burnisher, Nos. 2, 33.
- 1 each plug trimmer, Nos. 31, 32.
- 2 boxes strips, assorted.
- 1 disk tray (1400).
- 1 box extra fine cuttle-fish disks.
- 1 dental engine.
- 1 gross cavity burs, assorted.
- 1 right angle.
- 2 dozen right angle burs, assorted.
- 1 Herbert's rotary burnisher, No. 2.
- 1 each plug finishing bur, Nos. 200, 224, 242.
- 1 each engine drills, Nos. 102, 169.
- 3 mandrels, No. 303.
- 1 each gem points, mounted, Nos. 12, 9, 6.
- 1 corundum cavity point, mounted No. 2.
- $\frac{1}{2}$ dozen carborundum wheels, assorted.
- 1 each soft rubber cups, Nos. 1, 2, 3. . .
- 1 box leather polishing wheels.
- 1 cement spatula, No. 22.
- 1 glass mixing tablet, No. 2.
- 3 spools floss silk, waxed.
- 1 hot air syringe with reinforced point, No. 16.
- 1 mouth mirror, No. 6, (magnifying).
- 1 all metal, self-filling water syringe.
- 1 college pliers, No. 11.
- 1 foil carrier (Perry), No. 13.
- 1 alcohol lamp, Nos. 1 or 2.
- 1 annealing tray for gold.
- 1 ounce absorbent cotton.

- 1 ounce spunk.
- 1 box 6-inch cotton rolls, assorted.
- $\frac{1}{2}$ yard rubber dam.
- 1 Brewer universal rubber dam clamp forceps.
- 1 Ainsworth rubber dam punch.
- 1 rubber dam holder, novel No. 4.
- 1 rubber dam weight, No. 3.
- 1 each Ivory dam clamps, Nos. 1, 2, 5, 7, 10, 11.
- 1 Arkansas stone in box.
- 1 "Every Day" mortar and pestle.
- 1 box tooth polishing brushes, assorted.
- 1 wood plugging mallet, No. 1.
- 1 thin ribbon saw.
- 1 each Bennetts automatic plugger points, Nos. 1, 2, 3, 4, 5, 7, 8, 10.
- 1 S. S. White automatic plugger point, No. 111.
- 3 automatic handles.
- 1 pair Case enamel cleavers.
- 1 pair gold foil shears, No. 8.
- 1 pair scissors, 6-inch, No. 27.
- 1 gum lance, No. 1.
- 1 bundle orange wood.
- 1 dozen $\frac{1}{2}$ -ounce bottles (square).
- 3 office preparation bottles, No. 6.
- 1 box labels (medicine).
- 2 dozen large napkins.
- 1 dozen towels.
- 50 small doilies.
- 1 sheet thin matrix material.
- $\frac{1}{2}$ dozen disks, Vulcarbo disk.
- 1 separator (optional).
- 1 automatic plugger (optional).

Probable cost of the above set of instruments, complete, including dental engine, \$100 to \$125.

REQUIRED FOR COURSE IN ORTHODONTIC TECHNIQUE

- 1 Pair of Angle Soldering.
- 1 Lowrie Plaster Knife.
- 1 5 inch Knife edge File.
- 1 Wire Cutter.
- 1 pair No. 11 Crown Shears.
- 1 Millimeter Gauge.
- 1 Set of Angle Impression Trays.

REQUIRED FOR ORTHODONTIC CLINIC

- 1 pair of Angle Brand Forming Pliers
- 1 pair of Angle Wrenches.
- 1 pair of Straight Howe Pliers.

**NUMBER OF CASES TREATED DURING THE YEAR
1906-1907**

Patients treated in all departments.....12,219

OPERATIVE DEPARTMENT

Fillings—gold,	1,348
Gold inlays,	380
Porcelain inlays,	200
Fillings—amalgam,	2,898
Fillings—cement,	902
Pulp Cases,	1,349
Putrescent cases,	326
Root fillings,	1,675
Cleaning cases,	955
Pyorrhœa cases,	105
Extraction cases,	569
Abscess cases,	129

PROSTHETIC DEPARTMENT

Full dentures,	103
Full dentures—metal,	56
Partial dentures,	80
Partial dentures—metal,	55
Crowns,	1,127
Porcelain crowns, including baked,	215
Pieces of bridge-work,	218

ORTHODONTIA DEPARTMENT

Sets of teeth regulated,	10
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ORAL SURGERY DEPARTMENT

Necrosis cases,	15
Maxillary cases sinus,	10
Hare-lip cases,	12
Cleft Palate cases,	8

THE ALUMNI ASSOCIATION

OFFICERS FOR 1907-8

PRESIDENT, E. A. Rogers, D. D. S., Iowa City, Iowa.

VICE-PRESIDENT, F. B. James, D. D. S., Wilton, Iowa.

SECRETARY, J. E. Rose D. D. S., Vinton, Iowa.

TREASURER, J. J. Booth, D. D. S., Marion, Iowa.

Executive Committee

R. S. BANDY, D. D. S., Tipton.

WM. S. HOSFORD, D. D. S., Iowa City.

F. E. MILLER, D. D. S., Cedar Rapids, Iowa.

The time of next meeting of the Alumni Clinic will be announced at a later date by the Executive Committee.

Members of the profession who receive this announcement are requested to notify the dean of any change in address. They will also confer a favor by sending the names of other dentists practicing in the towns in which they reside. For further information application should be made to the dean.

THE COLLEGE OF PHARMACY

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, PH. D., LL. D.

PRESIDENT.

WILBER JOHN TEETERS, M. S., PH. C.

DEAN; Professor of Pharmacognosy, and Director of the Pharmaceutical Laboratory.

EMIL LOUIS BOERNER, PH. G., PHAB. D.

Professor Emeritus of Practical Pharmacy.

ELBERT WILLIAM ROCKWOOD, M. D., PH. D.

Professor and Head of the Department of Chemistry and Toxicology.

CHARLES SUMNER CHASE, M. A., M. D.

Professor of Materia Medica and Therapeutics.

BOHUMIL SHIMEK, C. E., M. S.

Professor of Physiological Botany, Professor of Botany in the College of Pharmacy, and Curator of the Herbarium.

LAWRENCE MARSHALL BYERS, M. A., LL. B.

Professor of Pleading and Practice in the College of Law; Lecturer on Pharmacy Jurisprudence.

CARL LEOPOLD VON ENDE, M. S., PH. D.

Assistant Professor of Chemistry.

WILLIAM JAY KARSLAKE, M. S., PH. D.

Assistant Professor of Chemistry.

ROBERT BRADFORD WYLIE, PH. D.

Assistant Professor of Botany.

ZADA MARY COOPER, PH. G.

Instructor in Pharmacy.

CHARLES DELOS POORE, A. C.

Instructor in Chemistry.

ADIN NOYES BROWN, PH. G.

Assistant Instructor in Chemistry.

ROE EUGENE REMINGTON, B. A.

Assistant Instructor in Chemistry.

NELSON DREW WELLS, B. PH.

Tutor in Medical Latin.

JAMES CHARLES MCGREGOR, M. D.

Assistant Demonstrator in Pharmacology.

GENERAL INFORMATION

ORGANIZATION

The College of Pharmacy was organized in 1885, and is an integral part of the University. It offers a broad and thorough practical course in the various subjects pertaining to pharmacy, in order to satisfy the necessity for technical training in this subject now recognized by all who are seeking to prepare themselves for responsible positions as prescriptionists, manufacturing pharmacists, or drug inspectors and food analysts. The aim of the college, as the state institution, is to co-operate with the pharmacists of the state in their efforts to maintain and elevate the standard of the profession.

Personal interest and instruction has always been a feature of the college, and probably, in a large measure, is responsible for the success of its graduates. The students have all the privileges and share the spirit of a great educational institution.

BUILDINGS

The HALL OF CHEMISTRY AND PHARMACY is a three-story brick building, erected at a cost of about fifty thousand dollars, and furnishing about twenty-five thousand square feet of floor space. The lecture rooms are provided with all desirable conveniences for class demonstration. The chemical and pharmaceutical laboratories each occupy a floor space of 54 by 140 feet, divided into a general laboratory and smaller rooms for special research. The equipment is of modern type, and is being enlarged constantly through liberal appropriations of the legislature and the board of regents.

NATURAL SCIENCE HALL is devoted to the departments of biological science. The botanical museum and laboratories are

equipped with heavy oak, slate-topped tables to accommodate thirty individuals at once. An adequate provision for microscopes, photomicrographic camera, stereopticon, etc., has been made for both elementary and advanced study.

The GENERAL MEDICAL LABORATORIES occupy a fire-proof building of Bedford stone, with granite foundations. This building contains general and clinical laboratories of pharmacology, bacteriology, pathology, histology, and physiology.

PHARMACEUTICAL MUSEUM

The Pharmaceutical Museum contains a collection of old books, prescriptions, apparatus, and other material to illustrate the history and progress of pharmacy in Iowa. Pharmacists throughout the state are requested to make contributions to the museum of articles of this nature. All such gifts will be prominently displayed in cabinets provided for the purpose and will be labeled with the names of the donors.

LIBRARIES

Reading and reference libraries are maintained in connection with the chemical, botanical, and pharmaceutical laboratories. In the latter, the leading current drug journals are kept on file.

Students of the college have access also to the large collections in the general University library.

MORTAR AND PESTLE SOCIETY

The scientific society of the college, known as the Mortar and Pestle Society, gives an opportunity for the discussion of subjects of general and practical interest to pharmacists. Meetings are held every two weeks and any student of the college may become a member by signing the constitution. The society offers also social and intellectual advantages and practice in public speaking.

WEIGHTS AND MEASURES

The state's standards of weights and measures are kept

in the University under the supervision of the head of the department of mathematics and astronomy.

INSTRUCTION IN THE COLLEGE OF LIBERAL ARTS

Students of pharmacy who, without being candidates for degrees, desire to take work in the College of Liberal Arts in addition to their work in the College of Pharmacy, are allowed to take not exceeding five hours a week so long as they maintain a good standing in their pharmaceutical studies and do satisfactorily the work elected in the College of Liberal Arts. No additional tuition charges are made for such instruction.

ADMISSION TO PRACTICE

The Thirty-first General Assembly of the state passed a bill which modifies the law in regard to examination for registration as follows:

“Section 3. No person shall be eligible to take this examination until he has passed his twenty-first birthday and has presented to the commission his own affidavit and that of his employer or employers, affirming that he has had not less than four years’ practical experience (including the actual number of weeks he has spent in a *reputable* college of pharmacy as hereinafter defined) as clerk under the supervision of a registered pharmacist in a drug store or pharmacy in which physicians’ prescriptions are compounded. Provided, however, that graduates of *reputable* pharmaceutical schools and colleges whose entrance and graduation requirements are equivalent to those prescribed by the American Conference of Pharmaceutical Faculties for the year 1905, and whose course of study consists of two years of not less than thirty-six (36) weeks each, shall be eligible to take the examination without proof of experience as hereinbefore defined.”

The College of Pharmacy holds membership in the Conference of Pharmaceutical Faculties of The American Pharmaceutical Association, and its graduates are permitted to take the examination of the state board without other experience than that obtained in the two years of college work.

SECURING POSITIONS.

The members of the faculty of the University will do all in their power to aid students to secure good positions, and in this they ask the co-operation of the pharmacists of the state. In the past it has been impossible to fill all the requests for thoroughly qualified graduates.

TUITION AND EXPENSES

For tuition and expenses see pages 72 ff.

PRIZES

LINDLY PRIZE—Mr. John M. Lindly of Winfield, Iowa, offers a prize consisting of Britton and Brown's *Illustrated Flora* to the student of the senior class who shall bring from his home county the best herbarium of not less than fifty plants. The candidate before receiving the prize must become a member of the University Pharmacy Alumni Association, and the collection shall become the property of Mr. Lindly.

ALUMNI ASSOCIATION PRIZE—The Alumni Association of the college extends a free membership to the member of the graduating class attaining the highest general average in all branches of study.

Awarded in 1906 to John Van Steenberg, Sioux Center, Iowa; with honorable mention of Fred C. Schadt, Amana, Iowa.

MEMBERSHIP IN A. PH. A. PRIZE—Membership in the American Pharmaceutical Association is offered by Dean Wilber J. Teeters to the member of the senior class who in competitive examination is rated highest in recognition and description of organic drugs.

Awarded in 1906 to M. C. Sayers, Ames, Iowa; with honorable mention of M. R. Dickson, Muscatine, Iowa.

REQUIREMENTS FOR ADMISSION

Each applicant for admission must present to the faculty a satisfactory certificate of good moral character.

The following classes of applicants may be admitted to junior standing without examination:

1. Pupils who have only partially completed the course of study of a state normal school, accredited high school or academy, or other secondary school whose courses of study are approved by the University, upon presentation of certificates signed by the superintendent or the principal showing that they have completed the equivalent of at least *two years* of high school work, or *sixteen* (16) preparatory credits*. This certificate must be made on a blank form which may be obtained by addressing the president of the University, the dean of the College of Pharmacy, or the university examiner.

2. Graduates of state normal schools, of accredited high schools or academies, or of other secondary schools whose courses of study are approved by the University, who present diplomas or certificates showing such graduation.

3. Graduates or matriculates of reputable universities or colleges who present diplomas or certificates of honorable dismissal from such universities or colleges.

All other applicants may be admitted *only upon passing examinations* in the subjects named in the program of entrance examinations given below, or other subjects which are real equivalents.

Applicants presenting certificates from accredited schools

*In estimating the amount of work required for admission, a *preparatory credit* is regarded as the equivalent of one study daily for a semester of eighteen weeks on the basis of four studies a day; thus eight credits stand for a normal year's work.

for work not fully meeting the requirements for admission, will be examined in the subjects in which they are deficient.

Notice is given that the requirements for admission are to be extended in subsequent years.

It is urged that anyone expecting to enter the College of Pharmacy next September send all certificates of preparatory work to the university examiner *as early in the summer as possible, and certainly before September 1*. If the credentials are satisfactory a card of admission will be sent to the applicant at once.

Admission to the senior class is gained by passing an examination in the branches of study taught during the junior year. Students presenting evidence of having passed the junior examination in another recognized college or school of pharmacy will be admitted without examination.

ENTRANCE EXAMINATIONS

Any person expecting to enter the College of Pharmacy in September, 1907, should be careful to learn before the opening of the University exactly what entrance examinations he will be required to pass. He can learn this by addressing the president of the University, the dean of the College of Pharmacy, or the university examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the program given below*. He should present himself at once at the office of the university examiner who will give all necessary directions.

For *each separate* examination given at any other time than that announced in the following program, a fee of *one dollar* will be charged by the University. For a series of examinations covering two or more subjects, a fee of *two dollars* will be charged.

PROGRAM OF ENTRANCE EXAMINATIONS

FIRST SEMESTER

Wednesday, September 18 to Saturday, September 21, 1907

English and

English Grammar,	2 credits,	Thursday,	1:30 P. M.
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U. S. History,	1 credit,	Friday,	9:00 A. M.
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Civil Government,	1 credit,	Friday,	10:00 A. M.
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Algebra through

Quadratics,	3 credits,	Friday,	1:30 P. M.
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Physical Geography,	1 credit,	Friday,	5:00 P. M.
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Botany,	1 credit,	Saturday,	9:30 A. M.
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Physiology,	1 credit,	Saturday,	10:30 A. M.
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SECOND SEMESTER

The examinations will be held between Thursday, February 6 and Saturday, February 8, 1908, according to a program which will be posted by the University examiner before the close of the first semester.

ADMISSION WITHOUT EXAMINATION

Students of mature age may enter without formal examination upon such studies as they may be prepared to pursue, with the understanding that before they may become candidates for a degree, they shall have satisfied all entrance requirements.

ADVANCED STANDING

Students making application for advanced credit must present credentials showing that they have pursued successfully in a reputable college the branches in which they desire credit, or if admission to the senior class is desired they must furnish certificate showing that they have passed successfully the junior examinations of a reputable college of pharmacy.

DEGREES

Every person upon whom the diploma of this college is conferred must be of good moral character; must have arrived at the age of twenty-one years; and must have attended two full courses of lectures, including two full courses of pharmaceutical, microscopical, and chemical laboratory practice, the last one of which shall have been completed in this college.

The degree of Graduate in Pharmacy (Ph. G.) will be granted upon fulfillment of the above conditions.

The degree of Pharmaceutical Chemist (Ph. C.) will be granted upon fulfillment of the above conditions together with the work outlined by the faculty for the third year.

COURSES OF STUDY

TWO-YEARS COURSE

The two-years course provides the foundation for the successful practice of pharmacy and the fundamental work in organic and analytical chemistry required for various manufacturing pursuits.

THREE-YEARS COURSE

The three-years course is designed to meet the demand of those who wish to prepare for superior service, particularly for the new positions occasioned by the Pure Food and Drug Law as drug inspectors, and analytical and food chemists, and to meet the needs of skilled men in the higher grade of manufactories.

Full liberty of election of subjects is granted in this year.

FOUR-YEARS COURSE

The addition in the near future of a four-years course, combining an academic and professional course and leading to the degree of Bachelor of Science in Pharmacy (B. S. in Phar.), is contemplated.

DESCRIPTION OF COURSES

The courses of instruction embrace lectures, recitations, and laboratory exercises. The most modern methods of instruction are followed and an unusually large amount of carefully systematized laboratory instruction is given under the direct supervision of the professor in charge. The student in this way not only has an opportunity to apply theory but becomes proficient in the manipulative skill indispensable to the pharmacist.

In order to impress on the mind the application of scientific facts, equal stress is also placed upon experimental and theoretical work in chemistry. Organic chemistry is studied the last nine weeks of the junior year and continued with quantitative analysis throughout the second year, and in this as well as in the first-year's course careful laboratory work accompanies the lectures. The work of the third year is entirely elective, allowing the student to specialize and fit himself for the various special lines open to manufacturing pharmacists or analytical chemists.

The theory and practice of pharmacy is made more real by having the apparatus or preparation under discussion always at hand when possible.

The study of botany is accompanied by laboratory work, field excursions, board drawings, and lectures illustrated by the stereopticon; while pharmacognosy is also studied with drug in hand, specimens being furnished for home study.

The course in pharmaceutical Latin is especially adapted to the needs of the pharmacist.

Pharmaceutical mathematics and its application to the every-day work of the pharmacist receives much attention.

In materia medica the action of many drugs is demonstrated in the pharmacological laboratory. Courses in the

analysis of urine, gastric juice, milk and water may be elected in the senior year.

PHARMACY

PROFESSOR TEETERS; MISS COOPER

THEORETICAL PHARMACY

*1 (2). JUNIOR THEORETICAL PHARMACY. 4 (3) hrs.

This course begins with lectures considering the history of pharmacy and the text-books and books of reference, used. Remington's *Practice of Pharmacy* is used as a guide and each subject carefully considered. Lessons are assigned and recitations elucidated by apparatus used in the various processes and preparations under discussion. The composition, methods of preparation, physical properties, impurities, and tests of the various substances have attention according to their importance or value in pharmacy.

3 (4a). SENIOR THEORETICAL PHARMACY. 3 hrs.

This course is a continuation of course 1 (2), and includes a detailed consideration of inorganic and organic acids and official salts; fixed and volatile oils and fats; alkaloids and glucosides. Special attention is paid to the chemistry and incompatibility of the above, also to their physical characteristics, therapeutic properties, dose, and price.

4b. SENIOR PRESCRIPTION STUDY. 2 hrs.

The study of the prescription is taken up in detail—incompatibility, pharmaceutical, therapeutical and chemical; solubility of ingredients, price, etc., are considered; also practice is provided in reading difficult prescriptions from photographs taken from actual prescription files and thrown on the screen.

The lectures are followed under careful personal supervision by practical laboratory work in filling prescriptions, labeling, and wrapping ready for delivery.

*See note at bottom of page 111.

PRACTICAL PHARMACY

5 (6). JUNIOR PRACTICAL PHARMACY.

2 hrs.

In this course the student makes about 150 United States Pharmacopœia and National Formulary preparations, taking them up in progressive order, to illustrate the various processes used in pharmacy. Each preparation is graded separately and required to meet a reasonable standard of quantity, quality, and strength. The instruction embraces practice in the use of thermometers, hydrometers, specific gravity bottles, balances, etc. The preparation of hypodermic and compressed tablets, scale salts, pill masses, syrups, tinctures, fluid extracts, emulsions, suppositories, ointments, etc.

Each student receives a mimeographed copy of the list of preparations to be made which gives quantities and method to be employed in manufacture and serves as a guide for review. Professor TEETERS; Miss COOPER.

Two three-hour laboratory periods each week.

7 (8a). SENIOR PRACTICAL PHARMACY.

2 hrs.

This course will consist of the manufacture of about seventy-five preparations, selecting the more difficult galenicals from the U. S. Pharmacopœia, National Formulary and special formulas and will include the preparation of many chemicals which the pharmacist should and can prepare for himself with both advantage and profit. Professor TEETERS; Miss COOPER.

Two three-hour laboratory periods each week.

8b. SENIOR LECTURE AND LABORATORY COURSE.

2 hrs.

This course will have especially in view practical application of knowledge gained in previous courses and will consist in compounding prescriptions under careful individual instruction at the prescription counter, to illustrate chemical, pharmaceutical, and physiological incompatibility. Professor TEETERS; Miss COOPER.

Two three-hour laboratory periods each week.

9 (10). PRACTICAL PRESCRIPTION WORK.

The preparation of difficult official and unofficial preparations, practical prescription work, and the preparation and purification of chemicals.

QUIZ-CLASSES

11 (12) JUNIOR QUIZ-CLASS. 1 hr.

In connection with course 5 (6) a quiz-class is conducted, which covers difficulties likely to be encountered in laboratory work. The composition of various preparations, with chemistry involved, and the reasons for each step in their manufacture receive careful consideration. Miss COOPER.

13 (14a). SENIOR QUIZ-CLASS. 1 hr.

In connection with course 7 (8a) a quiz-class is conducted which aims to bring out all the important points concerning the preparations made in the laboratory. Each week's work is explained in advance, giving methods, and noting especially the precautions necessary for the successful manufacture of each preparation. The composition of each and the chemical reaction which takes place is carefully considered, together with uses, dosage, etc. Miss COOPER.

PHARMACEUTICAL ARITHMETIC

15. PHARMACEUTICAL ARITHMETIC. 3 hrs.

The aim of this course is to teach the student to use easily and accurately the various current weights and measures. Since the United States Pharmacopœia has adopted the metric system, and since this system of weights and measures is used in the laboratories, special effort is made to familiarize the student with it in all its practical details.

The relation of one system to another is considered, also the mutual relation of weight and volume. The calculation of strength and proportions in making pharmaceutical preparations, particularly the various kinds of percentage solutions, is carefully taken up as well as the dilution or concentration necessary to obtain any desired result. Computation of dosage is considered also and finally the value of alligation as applied to pharmaceutical problems. Junior year. Miss COOPER.

PHARMACOGNOSY

16. JUNIOR COURSE.

2 hrs.

The history, means of identification, constituents, action, dose, and official preparations of organic drugs are studied. The student is taught to apply his knowledge of botany and histology in the study of this subject.

Crude drugs are displayed in comparison with their active constituents and specimens are furnished free to the students. The commercial history of medicinal plants is considered in relation to its importance to the pharmacist. Professor TEETERS.

17 (18). SENIOR COURSE.

2 hrs.

Continuation of the previous course, completing a careful study of the organic drugs of the United States Pharmacopœia and the vast number of miscellaneous and more important unofficial drugs. Professor TEETERS.

19(20). RESEARCH WORK.

Research work in plant analysis and the analysis of proprietary preparations, new remedies, and prescriptions.

CHEMISTRY

PROFESSOR ROCKWOOD; ASSISTANT PROFESSOR VON ENDE,
ASSISTANT PROFESSOR KARSLAKE, MR. POORE, MR.
BROWN

*9. CHEMISTRY OF THE NON-METALLIC ELEMENTS.

3 hrs.

Lectures and recitations. Junior year. Mr. POORE.

10a. CHEMISTRY OF METALS AND THEIR COMPOUNDS.

3 hrs.

Lectures and recitations. Junior year. Mr. POORE.

10b. ELEMENTARY ORGANIC CHEMISTRY.

3 hrs.

Lectures and recitations. Mr. POORE.

114. ADVANCED QUALITATIVE ANALYSIS.

2 hrs.

A laboratory course, with collateral reading, dealing with the separation and identification of more complex mixtures than are given in an elementary course. Assistant Professor KARSLAKE

*See note at bottom of page 111. The laboratory periods in chemistry are each three hours in length.

109 (110). QUALITATIVE ANALYSIS. 3 hrs.

The time is devoted to the qualitative analysis of complex mixture both wet and dry processes being used. Special emphasis is laid upon applications that can be made to pharmaceutical problems. Junior year. Mr. BROWN.

201 (202). ORGANIC CHEMISTRY. 3 hrs.

A lecture course, with collateral reading, quizzes, and recitations upon the chemistry of the compounds of carbon. This course aims to give the pharmaceutical student a good general knowledge of the fundamental principles of the subject as well as an acquaintance with some of the more important organic compounds. The course is accompanied by the organic laboratory course 223 (224). Assistant Professor KARSLAKE.

221. ORGANIC CHEMISTRY. 3 hrs.

Course 201 (202) abridged. Assistant Professor KARSLAKE.

223 (224). ORGANIC CHEMISTRY. 2 hrs.

A laboratory course designed to supplement the lecture course in order to familiarize the student more thoroughly with the methods of preparation and the properties of some of the more important organic compounds both from a pharmaceutical and a chemical point of view. Assistant Professor KARSLAKE.

225. ORGANIC CHEMISTRY.

Course 223 (224) abridged. Assistant Professor KARSLAKE.

Five laboratory hours each week.

128b. QUALITATIVE ORGANIC ANALYSIS. 2 hrs.

A laboratory course dealing with the detection and identification of the more important classes of organic compounds, as well as individual organic substances, by means of their characteristic properties. Assistant Professor KARSLAKE.

Second semester, last four weeks.

197a. GRAVIMETRIC ANALYSIS. 1 hr.

This course aims to acquaint the pharmaceutical students with some of the fundamental operations of quantitative analysis and takes up the gravimetric determination of alcohol,

iron, sulphur or chlorine, magnesium or phosphorus, and oxalic acid. Assistant Professor KARSLAKE.

197b. VOLUMETRIC ANALYSIS OR ASSAY. 1 hr.

This course takes up the preparation of the more important volumetric solutions and their use in volumetric assays as directed by the U. S. Pharmacopœia. Volumetric solutions of potassium hydroxide, sulphuric acid, potassium permanganate, potassium dichromate, sodium thiosulphate, and iodine are prepared and studied.

198. ASSAY OF DRUGS. 1 hr.

A course dealing with the assay, and assay-processes, of such important U. S. Pharmacopœial substances and preparations as opium, nux vomica, cinchona, oil of lemon or oil of cloves, whiskey, aconite, belladonna, ipecac, jalap, and ferrie chloride. Assistant Professor KARSLAKE.

Second semester, fourteen weeks.

160. ULTIMATE ORGANIC ANALYSIS. 2 hrs.

This is designed to give the student familiarity with, and practice in the most approved methods for the quantitative determination of carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus and the other elementary constituents of organic substances. Assistant Professor KARSLAKE

161. WATER ANALYSIS. 1 hr.

This consists of laboratory work on the qualitative and quantitative determination of the impurities in natural waters. Emphasis is laid upon the interpretation of the results in judging the potability of the water or its suitability for domestic and technical purposes. Prerequisite, general chemistry and qualitative analysis. Assistant Professor KARSLAKE

241 (242a). TOXICOLOGY. 1 hr.

Lectures and recitations. The physiological and chemical action of the principal poisons is considered as well as their antidotes. The methods of identifying poisons in food, excreta, etc., are explained and illustrated by experiments. Senior year. Professor ROCKWOOD.

165, 166. TOXICOLOGY. 2 hrs.

An elective laboratory course in which are demonstrated the methods used for the identification and quantitative determination of poisons, as well as the methods of separating

them from foods, clothing, and various complex mixtures. The post-mortem lesions are studied and the means of localization and recovery from the tissues of the body. Prerequisites, general chemistry and qualitative analysis. First or second semester. Professor ROCKWOOD.

163, 164. FOOD ANALYSIS. 2 hrs.

A laboratory course in testing foods as to their purity, together with the detection of preservatives, adulterants and substitutes. Prerequisites as in 165, 166. Professor ROCKWOOD.

First or second semester.

205, 206. ORGANIC CHEMISTRY—Advanced course.

This is chiefly a laboratory course dealing with a study of some of the more difficult synthetical methods and the preparation of some of the more complex organic compounds. Assigned readings and references to original articles on the special topics will constitute an important part of the course. It is open to graduate students. Prerequisite, 201 (202), and 223 (224). Assistant Professor KARSLAKE.

227 (228). PHYSIOLOGICAL CHEMISTRY. 2 hrs.

Lectures and recitations. The lectures are in explanation and amplification of the laboratory work. They include the study of the proximate principles of the body and their chemical changes, also foods and digestion, blood, milk, urine, fermentation, and bacterial products. Professor ROCKWOOD.

229. GENERAL PHYSIOLOGICAL CHEMISTRY.

A laboratory course. The proximate principles of the body and food materials are prepared by the student and their properties and chemical changes are studied. Experiments in artificial digestion are made, their products being isolated and examined. The constituents of the blood are tested chemically and spectroscopically. Professor ROCKWOOD; Mr. POORE.

Two to four laboratory hours each week.

230. APPLIED PHYSIOLOGICAL CHEMISTRY.

A laboratory course. The modern methods of physiological chemistry are here used in solving problems which arise in the practice of medicine. These include such as the analysis of the gastric juice, quantitative tests being made where they

are valuable for diagnostic purposes; the qualitative tests for the abnormal constituents of the urine, with the quantitative determination of such as are of importance; the identification of urinary sediments, of calculi, and of blood stains. Each student makes a complete examination of a large number of each of these, handling in written reports for correction and suggestions. Professor ROCKWOOD; Mr. POORE.

Two to four laboratory hours each week.

251. THEORETICAL AND PHYSICAL CHEMISTRY. 2 hrs.

Lectures, covering chemical statics and dynamics, thermo and electro-chemistry. Assistant Professor VON ENDE.

253, 254. THEORETICAL AND PHYSICAL CHEMISTRY. 1 or 2 hrs.

Laboratory course. Courses 251, 253 or 252, 254 may be taken simultaneously or independently. Assistant Professor VON ENDE.

BOTANY

PROFESSOR SHIMEK; ASSISTANT PROFESSOR WYLIE

*1. PLANT PHYSIOLOGY AND HISTOLOGY. 2 hrs.

This course is designed to give the student a knowledge of the activities of ordinary plants. It embraces the study of so much of structure as is necessary to an understanding of the processes which ultimately result in the formation of organic products, among which those of professional value to the pharmacists are specially studied. The course is introductory to course 3 (4). Junior year. Professor SHIMEK; Assistant Professor WYLIE.

2. SYSTEMATIC BOTANY. 2 hrs.

This course consists of the study of the organography of plants with a view to acquiring familiarity with the terms and methods which are used for purposes of description and identification.

Types of the principal orders of greatest economic value are studied in detail, and special attention is given to the spring medicinal flora. In order that the student may also acquire some familiarity with the rich autumnal flora this course is continued for about four weeks in the first semester of the senior year. Junior year. Professor SHIMEK.

*See note at bottom of page 111.

3 (4). MICROSCOPIC TECHNOLOGY.

2 hrs.

This course includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining, and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs, as well as in the detection of adulteration. Each student taking this course prepares at the laboratory for his own use a cabinet of microscopic slides, illustrative of many of the more important official drugs. Senior year. Professor SHIMEK; Assistant Professor WYLIE.

MATERIA MEDICA AND PHARMACOLOGY

PROFESSOR CHASE; DR. MCGREGOR, MR. WELLS

***1 (2). MEDICAL LATIN.**

2 hrs.

This course is intended for those who have previously had little opportunity to study Latin. The principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine, are studied. Special attention is given to pharmacopœial nouns and expressions. The prescription is taken up, its definition, synthesis, comprising-form, grammatical construction, language, etc., followed by its analysis. Mr. WELLS.

3. PHYSIOLOGY.

2 hrs.

A knowledge of the action of drugs can be obtained by the student of pharmacy only by empirical or rational methods. Since the former, based upon clinical observation of their uses, is obviously beyond his reach, the latter, or rational method must be followed. Since this is based upon the observed or known action of drugs upon living animal cells, tissues, organs, apparatus, etc., it is desirable that the student should be given at least an elementary course in physiology. To this end the first part of the course in materia medica is devoted to familiarizing the student with such anatomical structures and their functions as are related to the subject of drug-action. Junior year. Dr. MCGREGOR.

*See note at bottom of page 111.

4. MATERIA MEDICA.**2 hrs.**

Following the preceding the student is given preliminary definitions of the subject. The various official preparations are defined and discussed. The routes and modes of administration of remedies, and their physiological and toxicological action are considered. The subjects of dosage and incompatibilities as related to prescription-writing are presented; the former finally, the latter begun, to be continued as a parallel study in the consideration of individual drugs. The study of the origin, source, composition, chemical characteristics, modes of preparation and of administration, and physiological action of drugs of the organic materia medica is begun. Junior year. Professor CHASE.

5. MATERIA MEDICA—Advanced course.**2 hrs.**

The preceding course, together with the study of inorganic drugs, is concluded. The student is also given drill in prescription-interpretation. Serum-therapy, anti-toxins, organic extracts, vaccine-virus, etc., furnish topics to be specially considered in this course. The subject of emergencies and how they may be met by the pharmacist in the absence of the physician, with a final review, concludes the course. Senior year. Professor CHASE.

6. PHARMACOLOGY.**2 hrs.**

A laboratory course presenting a practical knowledge of the physiological action of drugs. Required for seniors. Dr. MCGREGOR.

PHARMACY LAW**PROFESSOR BYERS**

During the second semester of each year a short course of lectures is given which treats of the validity and construction of laws restraining the practice of pharmacy, and of pharmacists' liability, both criminal and civil, for their own violations of laws and of violations on the part of their agents.

SCHEDULE OF STUDIES

JUNIOR YEAR

Theoretical Pharmacy 1 (2),
Practical pharmacy 5 (6), 11 (12),
Chemistry, lectures and recitations 9, 10a, 10b,
Chemistry, qualitative analysis 109 (110),
Pharmaceutical arithmetic 15,
Botany 1, 2,
Medical Latin 1 (2),
Physiology 3,
Pharmacognosy 16,
Materia medica, 4.

SENIOR YEAR (PH. G. COURSE) OR JUNIOR YEAR (PH. C. COURSE)

Theoretical pharmacy 3 (4a), 4b,
Practical pharmacy 7 (8a), 8b, 9 (10), 13 (14a),
Chemistry, organic—Lectures 201 (202) or 221,
Chemistry, organic—Laboratory 223 (224), or 225,
Chemistry, analytical 128b, 197a, 197b, 198,
Materia medica and pharmacology 5, 6,
Botany 3 (4),
Pharmacognosy 17 (18),
Toxicology 241 (242a),

NOTE—If course 221 is elected in place of course 202(202) equivalents approved by the professor of chemistry must be elected from the optional courses offered in chemistry.

THIRD-YEAR COURSE FOR DEGREE OF PH. C.

One year's work of fifteen hours each semester is required, of which ten hours at least should be elected from chemistry, with the approval of the head of the department. Five hours may be elected from any allied science with the approval of the dean of the college.

TEXT-BOOKS

FOR JUNIORS—*U. S. Pharmacopoeia*, Remington's *Practice of Pharmacy*, *National Formulary*, Sayre's *Organic Materia Medica and Pharmacognosy*, Wilcox's *Materia Medica and Pharmacy*, Macbride's *Lessons in Elementary Botany*, Gray's or Wood's *Manual*, Sturmer's *Pharmaceutical Arithmetic*, Crothers and Bice's *Elements of Latin for Students of Medicine and Pharmacy*, Remsen's *College Chemistry*, Cohen's *Organic Chemistry*.

FOR SENIORS—In addition to the above, Caspari's *Treatise on Pharmacy*, Coblentz's *Hand-Book of Pharmacy*, Seoville's *Art of Compounding*.

REFERENCE BOOKS

U. S. Dispensatory, *National Standard Dispensatory*, King's *American Dispensatory*, Fresenius's *Analytical Chemistry*, Hoffman and Power's *Examination of Medicinal Chemicals*, Gray's *Botanical Text-Book*, Vol. II.

Schneider's *Powdered Vegetable Drugs*, Flueckiger's *Principles of Pharmacognosy*.

ALUMNI ASSOCIATION

The Alumni Association takes a deep interest in the work of the college. Yearly meetings are held during commencement week, and the proceedings of the association are published together with the register of alumni. Officers for 1906-7 are as follows:

President—W. F. WEBBLES, Davenport, Iowa;

First vice-president—A. F. LONGWELL, Wellman, Iowa;

Second vice-president—BERENICE SCHAUMLOEFFEL, Gentry, Missouri;

Recording secretary—J. M. LINDLY, Winfield, Iowa;

Corresponding secretary—W. F. JUNGER, Reinbeck, Iowa;

Treasurer—J. A. FARLEY, Iowa City, Iowa;

Executive board—A. N. BROWN, Iowa City, Iowa; W. L. WATTERS, West Liberty, Iowa; ZADA M. COOPER, Iowa City, Iowa.

The executive board desires to be notified of any changes of address on the part of members of the association.

THE SCHOOL OF MUSIC
(AFFILIATED)

OFFICERS OF INSTRUCTION AND ADMINISTRATION

GEORGE EDWIN MACLEAN, Ph. D., LL.D.

PRESIDENT

EFFIE MAE PROFFITT.

DIRECTOR; Instructor in Voice, Art of Singing and Song Interpretation; Conductor of Music.

IDA WINSLOWE FELKNER.

Instructor in Pianoforte and Musical Interpretation.

ANNA DILLER STARBUCK.

Instructor in Pianoforte, Organ, Harmony, Theory and History and History of Music.

HENRY GIVEN COX.

Instructor in Violin and Orchestral Instruments; Conductor of University Band and Orchestra.

Instructor in Public School Music and Sight Reading.

GENERAL INFORMATION

LOCATION

The University School of Music occupies a brick building on Clinton street facing the main campus directly opposite the new Hall of Natural Science.

In addition to the studios of the instructors the building contains pleasant reception and reading rooms, a hall for smaller public recitals, a private recital hall, containing two grand pianos, and convenient and attractive practice rooms. Arrangements are being made to have a music stack room and to furnish the pupils and teachers with the music they will use. The studios and recital halls are furnished with fine grand pianos.

ADVANTAGES

The University School of Music aims to furnish superior advantages to those who desire to make a special study of music in any of its branches, as well as to those who desire to do musical work in connection with their University studies. Those who are not prepared to enter or who do not wish to enter the University may be received into the School of Music by arrangement with the director.

The University and Iowa City offer many advantages, musical and literary, to a student of music. Aside from the classes in art, history, languages and literatures, numerous public lectures at the University, the University library, the library of the State Historical Society, the Carnegie library of Iowa City, and the University gymnasiums are also open to students of music.

~~Also~~ Clubs and an Apollo Club are organized in the

University, in which the students of music are expected to take an active part; and the various churches of the city have good choirs where the more advanced pupils are given opportunity for chorus work and the study of sacred music.

VOICE

Voice training, including the principles of breathing as applied to tone production, voice placing, execution, and interpretation, is given by the department of vocal music, in a thorough course, as follows:

Breathing exercises for the development of lung capacity and muscular control of the breath.

Study of voice placement, beginning with careful work on single tones; extension of compass and equalization of registers; vowels and consonants to secure correct pronunciation and clear enunciation, and exercises for velocity and execution.

Cultivation of taste to express the various emotions, so that the pupil may be able to understand and interpret for himself the writings, simple and moderately difficult, of the famous composers of the past and present.

Throughout all, it is the aim of the department to cultivate ease and simplicity of expression, by those methods which practice and experience have proven most natural and efficacious as adapted to the particular needs of individual pupils.

Regular term recitals are held and in addition students' practice-recitals afford students an opportunity to become accustomed to appearing before an audience and time for discussing topics of common interest.

PIANOFORTE

The object of the course is to enable students to interpret the musical masterpieces. As a necessary means to this end the course includes systematic study of technical exercises in the free use of the muscles of the hand and arm. Technical exercises of Raif Schmitt and Plaidy are used; studies of Czerny, Lambert, Chamer and Clementi; etudes of Chopin,

Henselt, and Rubinstein. Among the great compositions that are studied are those of Bach, Haydn, Mozart, Beethoven, Mendelssohn, Schumann, Chopin and Schubert; and among the modern composers are McDowell, Hollaender, Tchaikowsky, Schyte and Moskowsky.

Table-technique, rhythm, musical interpretation, sight-reading, ear-training, and quartet-work are offered.

ORCHESTRAL AND BAND INSTRUMENTS

The course arranged for students of orchestral and band instruments is comprehensive and is arranged to meet the individual needs of pupils. The instruction used is based on the studies pursued in the great German and French conservatories, the object being the best foundation and development of technical certainty and artistic interpretation. Opportunities for ensemble playing and quartet practice are given to the more advanced pupils.

PIPE ORGAN

The course includes the study of manual touch, pedaling, registration, and studies in polyphonic playing. Students of the organ must have some preliminary training on the piano-forte.

HISTORY AND THEORY OF MUSIC

A course is offered in the history of music covering especially the development of modern music from its earlier forms. The differences between the various composers is, so far as possible, illustrated by performance of typical selections from their works.

The course in the theory of music includes a study of harmony, counterpoint, canon and fugue, musical form, musical analysis, and free composition. The aim of the course is not only to develop latent ability in musical composition, but to furnish the theoretical knowledge which will help students to a more full and intelligent appreciation of music.

PUBLIC SCHOOL MUSIC

The normal public school music course is taught in the simplest and most direct manner. The course includes practical harmony, ear training, sight reading, history of music, and practical teaching. Students taking the course have opportunity to visit the public schools of the city and to see the work of the course in active operation.

LECTURES

Among the advantages is a course of lectures upon musical topics by members of the faculty and by professors from various departments of the University. Students in the School of Music will be admitted to these lectures without charge.

RECITALS

Faculty recitals are given at intervals during the year in the Auditorium of the Hall of Liberal Arts.

Students' recitals are given from time to time and are one of the most important incidental advantages of the school. All music students are required to attend and those qualified are selected to participate.

ARTISTS' RECITALS

To afford students the opportunity of hearing artists of superior ability, a series of recitals is given during the year by the greatest talent available.

REGULATIONS

Tuitions must be paid in advance.

No tuition will be refunded except in cases of protracted illness.

Lessons are lost to pupils who fail to appear at their regular hour, unless previous arrangements have been made with the instructor.

Students are expected to consult with the director before arranging to take part in any public musical exercise.

A nominal fee is charged for glee club membership.

All music students will have the privileges of the gymnasium, but a gymnasium fee of \$1.00 a semester is required of students not registered in any of the colleges of the University.

TUITION AND EXPENSES

The year of the School of Music extends from the middle of September to the beginning of June and is divided into four quarters of nine weeks each.

The tuition is as follows, for each quarter:

For voice, pianoforte, organ, or violin,

Two lessons a week (half hour).....\$25.00

One lesson a week (half hour)..... 13.50

For harmony,

Two lessons a week—class of six (one hour).....\$7.50

General class (one hour)..... 5.00

For theory,

Two lessons a week (one hour).....\$5.00

For history of music,

One lesson a week (one hour).....\$2.50

For table-technique,

One lesson a week (one hour).....\$4.00

For rent of piano,

One hour a day, each quarter.....\$2.50

PUBLIC LECTURES

PUBLIC LECTURES

Following is a list of public lectures given during the year 1906-7. Lectures marked with an asterisk (*) were illustrated:

1906

- Apr. 4. Department of Physics, *Light Waves*,* Mr. C. F. Lorenz.
- Apr. 18. Department of Physics, *Color and Color Photography*,* Mr. C. F. Lorenz.
- Apr. 25. Department of Physics, *The Invisible Spectrum*,* Professor K. E. Guthe.
- Apr. 30. Department of Physics, *General Properties of Waves** Professor A. G. Smith.
- May. 2. Department of Physics, *Electrical Waves*,* Professor K. E. Guthe.
- June 22. Department of Physics, *The Musical Scale*,* Professor K. E. Guthe.
- June 29. Department of Physics, *Color*,* Professor K. E. Guthe.
- July 6. Department of Physics, *Electrical Waves*,* Professor K. E. Guthe.
- Sept. 28. Baconian Club, *The Vertebrate Brain*,* Professor G. L. Houser.
- Oct. 3. Philosophical Club, *The Feelings as a Source of Knowledge*, Professor E. D. Starbuck.
- Oct. 5. Baconian Club, *Do the Chemical Elements Exist*, Professor E. W. Rockwood.
- Oct. 8. Early English Club, *The Study of the Old English*, President G. E. MacLean.
- Oct. 12. Baconian Club, *The Spiral Nebulae and Their Significance*,* Dean L. G. Weld.
- Oct. 19. Baconian Club, *The Tonoscope and its Use in Singing*,* Professor C. E. Seashore.

- Oct. 26. Baconian Club, *What is Matter?* Professor K. E. Guthe.
- Oct. 29. Art Club, *Ancient Painting*,* Professor F. D. Washburn.
- Nov. 2. Baconian Club, *Mechanical Drawing*,* Professor F. G. Higbee.
- Nov. 8. Philosophical Club, *The Dissociation of Personalities*, Professor C. E. Seashore.
- Nov. 9. Baconian Club, *The Relation of the Mechanical Trades to Each Other*,* Mr. F. G. Baender.
- Nov. 12. Whitney Society, *The Vedas*, Professor F. H. Potter.
- Nov. 13. Archaeological Institute, *Here and There in Greece*,* Professor C. H. Weller.
- Nov. 16. Baconian Club, *Does the Ion Simplify the Study of Chemistry?* Mr. C. D. Poore.
- Nov. 19. Whitney Society, *Homer*, Professor C. H. Weller.
- Nov. 19. Art Club, *The Dawn of Painting in Italy*,* Professor F. D. Washburn.
- Nov. 23. Baconian Club, *Illumination*,* Professor A. H. Forl.
- Nov. 26. Whitney Society, *Old High German Literature*, Professor C. W. Eastman.
- Dec. 3. Whitney Society, *Beowulf*, President G. E. MacLean.
- Dec. 7. Baconian Club, *The Shape of the Earth and Its Determination*, Professor A. G. Smith.
- Dec. 7. Archaeological Institute, *Some Early Christian Communities*,* Professor W. K. Prentiss, Princeton University.
- Dec. 10. Whitney Society, *The Elder Edda*, Professor G. T. Flom.
- Dec. 12. Komenian Society, *Bohemian as a Cultural Language*,* Professor Bohumil Shimek.
- Dec. 14. Baconian Club, *Recent Work in Immunity*,* Dr. Anfin Egdahl.
- Dec. 17. Art Club, *The Early Florentine Painters*,* Professor F. D. Washburn.
- Dec. 17. Whitney Society, *The Song of Roland*, Professor H. Le Daum.

1907

- Jan. 4. Baconian Club, *Scientific Results of the Hawaiian Cruise*,* Professor C. C. Nutting.

- Jan. 7. Whitney Society, *The Nibelungenlied*, Professor C. B. Wilson.
- Jan. 10. Philosophical Club, *Some Glimpses of a Spanish Realist in Education of the Early Sixteenth Century*,* Assistant Professor H. C. Dorcas.
- Jan. 11. Baconian Club, *A Study in Parasitism*,* Professor H. M. Kelley, Cornell College.
- Jan. 14. Whitney Society, *Dante*, Professor S. H. Bush.
- Jan. 18. Baconian Club, *Diseases of Animals Transmissible to the Human Being*,* Professor Henry Albert.
- Jan. 21. Art Club, *Umbrian, Paduan, and Venetian Schools of Painting*,* Professor F. D. Washburn.
- Jan. 25. Baconian Club, *The Tunnels and Subways of New York City*,* Professor B. J. Lambert.
- Jan. 28. Early English Club, *The English Language: Past and Present*, Professor G. T. Flom.
- Feb. 1. Baconian Club, *Fixation of Nitrogen*,* Mr. R. E. Remington.
- Feb. 5. Archaeological Institute, *Evolution in Architecture*,* Professor F. D. Washburn.
- Feb. 7. Philosophical Club, *Some Philosophical Aspects of Music*, Mr. R. P. Baker.
- Feb. 8. Baconian Club, *Smoke and Its Abatement*,* Professor E. L. Ohle.
- Feb. 9. College of Applied Science, *Water Power Development of the Pacific Coast*,* Professor B. F. Groat, University of Minnesota.
- Feb. 15. Baconian Club, *The Influence of Weather on Human*
- Feb. 18. Sigma Xi, *Biological Interpretation of Life*, Professor C. F. Minot, Harvard University.
- Conduct*, Dr. Daniel Starch.
- Feb. 25. Art Club, *The Great Florentines*,* Professor F. D. Washburn.
- Feb. 20. Komenian Society, *The Monroe Doctrine*, Professor J. M. Mekota, Cedar Rapids, Iowa.
- Feb. 27. Department of Philosophy and Psychology, *Practical Ethics, Ethics of Health: Food*, Mrs. Laura Clarke Rockwood.
- Mar. 1. Baconian Club, *Cinchona and Its Alkaloids*,* Dean W. J. Teeters.

- Mar. 4. Archaeological Institute, *The Art of Ancient Etruria*,* Professor G. J. Laing, University of Chicago.
- Mar. 6. Department of Philosophy and Psychology, *Practical Ethics, Ethics of Health: Drink*, Professor E. W. Rockwood.
- Mar. 8. Baconian Society, *A Bit of Geography and Geology Revised*, Professor Bohumil Shimek.
- Mar. 13. Department of Philosophy and Psychology, *Practical Ethics, Ethics of Health: Cleanliness*, Professor Henry Albert.
- Mar. 15. Baconian Club, *Mathematical Concepts*, Mr. R. P. Baker.
- Mar. 22. Baconian Club, *Some Points in the Geological History of the Mississippi River*,* Professor Samuel Calvin.
- Mar. 25. Department of Education, *The School from the Standpoint of Life*, Professor Charles DeGarmo, Cornell University.
- Mar. 25. Art Club, *The Great Venetians*,* Professor F. D. Washburn.
- Mar. 27. Philosophical Club, *Some Phases of the Development of Personality*,* Professor T. L. Bolton, University of Nebraska.
- Mar. 27. Department of Philosophy and Psychology, *Practical Ethics, Ethics of Health: Rest*,* Professor E. D. Starbuck.
- Apr. 5. Baconian Club, *The Idealist's Interpretation of Matter*,* Professor E. D. Starbuck.
- Apr. 30. Department of Physics, *Weather*,* Professor A. G. Smith.
- Apr. 12. Baconian Club, *How Many Miles Can We Travel Without Being Killed?** Dean W. G. Raymond.
- Apr. 9. Department of Physics, *Heat in Every Day Life*,* Professor K. E. Guthe.
- Apr. 17. College of Applied Science, *The Creation of a Manufacturing Plant*,* Mr. W. B. Snow, Hyde Park, Mass.
- Apr. 18. Department of Education, *Educational Lessons from the Old World*, Professor M. V. O'Shea, University of Wisconsin.
- Apr. 19. Baconian Club, *Facts and Fancies about Appendicitis*, Professor A. J. Burge.

- Apr. 16.** Department of Physics, *Light*, Mr. L. P. Sieg,
- Apr. 23.** Department of Physics, *Electricity in Every Day Life*,* Mr. A. G. Worthing.
- May 2.** Philosophical Club, *Preliminary Reports on Research in Progress in the Psychological Laboratory*.*
- May 6.** Art Club, *Italian Painting*,* Professor F. D. Washburn.
- May 15.** Komenian Society, *Bohemian Men of Science*,* Professor F. W. Bouska, Iowa State College of Agriculture and Mechanic Arts.

DEGREES CONFERRED
1906-1907
AND
ROSTER OF STUDENTS
OF ALL COLLEGES

DEGREES CONFERRED, 1906-1907

Degrees were conferred in June, 1906, unless otherwise indicated.

BACHELOR OF ARTS

Mary Annette Adams
George Carter Albright
Loren George Atherton
Justus Nathan Baird
Norah Baldwin

George Sherman Banta
Edward Cecil Barrett
Bertha Ewing Beauchamp
Edward Arthur Brinton

M. Di. Iowa State Normal,
1902

Augusta Brown

Edith Burge

Frances Alma Carroll

Olive Merrill Chase

Ray Eli Cleveland

M. Di. Iowa State Normal,
1904

Frederick Richard Cooper

Edith Hannah Curtis

M. Di. Iowa State Normal,
1895

Anna Louise De Sellem

Lois Craig Davidson

Orin Victor Davidson

Deborah Davis

M. Di. Iowa State Normal,
1897

Clara Doll

Harry Earnest Dow

Earle Moore Fitz

Edward Clarence Fitzgerald

Roy Lawrence Gardner

B. S. Di. Missouri Normal,
1902

Antoinette Helen Goetz

John Reuben Green

Virginia M. Haldeman

William Healy

Louis Henke

Raymond Orrin Hutchison

Fannie Belle Hayes

John Theron Illick, Jr.

Sadie Jacobs

Jeannette Jamison

Pamelia Pearl Jones

Ralph Emerson Jones

Wata Jane Jones

William Bixby Joy

William Henry Kalkofen

James Madison Kelley, Jr.

Carl William Knapp

Paul Jehu Kruse

Alice May Lancaster

Robert Lyman Leach

Eva May Luse

M. Di. Iowa State Normal,
1904

Leslie McAuliff

Sara Elizabeth McBride

Fay McIntyre

Frederick William McKinley

Ruth Maria Marsh

M. Di. Iowa State Normal,
1901

Mabel Clough Merritt

Margaret Jane Miller

Florence Mary Mingus

Winifred Morris

M. Di. Iowa State Normal,
1899

Louis Francis Mueller

Caroline H. Paulson

Martha Ann Paulus

Paul Marvin Payne

Lucy Olive Pingrey

Hiram T. Price

Mildred Price

Samuel Quigley

Roy Addis Redfield

Mary Louise Reherd

Myrtle Emeline Royal

Sarah Amelie Ruby

Clara Mary Schultz

Elizabeth Julia Sherwood

Mary Ellen Showalter

Jessie C. Shrimplin

Franklin Orion Smith

M. Di. Iowa State Normal,
1904

Kenneth David Steere

Marian Stookey

Joanna Gleed Strange

Julia Elmida Swanson

Mrs. Mabel M. Volland

Anna Frances R. Wachs

Eva Weber

Mary Parsons West

Myrta Gertrude West

Ralph Waldo E. Wharton

Mary Louise Woods

July, 1906

Clara Atwood Boss

Francis Luther Douglass

Edwin Christian Ebersole

Thomas Edward Johnson

Florence Rose Marshall

February, 1907

Edward D. Gepson

George Pendleton Koebel

Alice Edith Moore

Elias Fremont Schall

Grace Clarissa Tyler

BACHELOR OF PHILOSOPHY

Effie Clare Blum

Lucy Winifred Brant

Bendiks John Nelson

Verna May Shedd

Edna Pearl Stone

February, 1907

Louis Pelzer

BACHELOR OF SCIENCE

Perle Mae Battles

Arthur Neal Bean

Jay Sanford Burrell

Clifford Edgar Burton

Wilbur Edwin Coulter	Fred Moore
Grace Darland	Henry Martin Pahlas
Cleveland Reuben Duncan	Jessie Augusta Parish
Zoe Rae Frazier	M. Di. Iowa State Normal, 1905
Hiram Earl French	Verne Reynolds Pentecost
Royal F. French	Thomas Thiel Rider
Clara May Hayden	Samuel Micajah Savage
Genevieve Isherwood	Robert Wilson Stearns
Frank Carl Lemon	Arthur Clarence Wallace
George Henry Martin	Mildred Rebecca Yule
William Drummond Middleton	

July, 1906

Nathan Sidney Bevins	Beth M. Portlock
Garfield Eugene Breese	Horace Anthony Tweed

February, 1907

Lee Wilbert Popp

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Ernest Reuben Blakely	Irving Ray Isenberg
William John Bruins	Clifford Alonzo Randall
Henry Jacob Eckhardt	Edward John Ruff
Emil John Hemmer	Eliakim William Tupper
Richard Aaron Hershire	Bert J. Wright

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Garret Bos	John Robert MacDonald
Roy B. Champion	

BACHELOR OF SCIENCE IN MINING ENGINEERING

Frank Ernest Koeper	Earl Reinholdt Seidel
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BACHELOR OF LAWS

Robert Cushman Alford	Clarence Dean Burkheimer
William Ira Atkinson	John Emmett Burkheimer
Ervin Jeremiah Barker	Johnston Eakins Caldwell
Charles Raymond Barnes.	Ed Hoyt Campbell
B. A. Tabor College, 1903	Robert Steadman Carlton

Frank Milo Catlin	Roderick Emmet McHugh
John George Chalmers	Roger Joseph Meakim
B. A. Lafayette College, 1901	B. S. Iowa, 1904
Adelbert Christy	Claude Melvin Miller
Howard Rollin Churchill	Harry Mackey Neas
B. Ph. Cornell College, 1901	John Edwin Overbaugh
Cash R. Cross	B. Ph. Cornell College, 1903
B. S. Iowa, 1904	Constant Anton Paige
William Alden Cutler	Crockett Hector Pasley
B. Ph. Des Moines College, 1903	Daniel R. Perkins
Charles Henry Davis	B. Ph. Iowa, 1901
Samuel Roland De Con	Richard Roemer Ramsell
Louis Denton Dennis	Christian William Ramseyer
Ray Forest Drewry	M. Di. Iowa State Normal, 1902
B. Ph. Iowa, 1903	Louis Ernest Roddewig
Arthur Clement Edwards	Louis Howard Salinger
B. A. Upper Iowa University, 1898	Daniel Dietrich Schneider
Sigfrid Emanuel Floren	M. Di. Iowa State Normal, 1902; B. Ph. Iowa, '04
Thomas William Green	Carl Frederick Severin
Harry Martin Greene	Ross Sifford
Carl Oscar Gunderson	Walter Lawson Sims
Homer Eddison Haney	Daniel Frederic Steck
William Richard Hart	Edward Sulek
George Edgar Hill	Fred F. Thompson
B. Ph. Iowa, 1903	B. A. Cornell College, 1903
Floran Lewis Ink	Henry Grass Walker
James Edwin Kelly	Traffer V. Walker
John Franklin Kunz	Warren Henry White
B. Ph. Iowa, 1904	B. A. Iowa, 1904
Clarence Joseph Lambert	Joseph Urvin Yessler
Earl McDowell	B. Ph. Coe College, 1902
Alvah Earle McGowan	

DOCTOR OF MEDICINE

Fred Albert, Jr.	Max Rosecrans Charlton
B. Ph. Iowa, 1903; M. S., 1905	B. S. Iowa, 1903; M. S., 1905
George Allen Biebesheimer	Archie West Crary
William Fred Boiler	B. S. Cornell College, 1897; LL. B. Iowa, 1904
Royal Revere Burroughs	Frank Xavier Cretzmeyer
B. S. Drake University, 1902	William Henry Cuthbert
Ralph Leonidas Byrnes	John Graham Davis
B. S. Iowa, 1902	

Herbert Morgan Decker

D. D. S. Iowa, 1898

Harry Charles Durkee

Martin Luther Gray

Calvin Waldo Harned

D. D. S. Iowa, 1903

Samuel Willard Hartwell

Albert Vincent Hennessy

Harry Dwight Jarvis

Walter Edward Kechl

D. D. S. Iowa, 1903

James Claude Kessler

Elam Eugene Lashbrook

Harry Alexander Lindsay

Guy Alexander Lott

Francis Leonard Love

James Charles McGregor

Ray Allen McLean

B. S. Upper Iowa University, 1900

Thomas McMahon

Thomas Augustine Maher

Gerrit Maris

Fred Henry Messenger

Walter Newlon Moore

Harry Wilton Murphy

Alvah Negus

B. A. Penn College, 1890;

M. A., 1899

Mrs. Cora Weber Negus

William Graham Orr

Laurence Albert Quaife

B. Ph. Iowa College, 1903

Frank Noyes Rowe

Samuel Micajah Savage

Homer A. Smith

B. S. Cornell College, 1902

Charles Freeman Starr

Kuno Herbert Struck

Louis Stuhler

Maude Estella Taylor

B. S. Iowa, 1904

Charles Matthew Tierney

Perry H. Wessel

Walter Ernest West

Edward Harvey White

Herman John Wickman

Creighton David Williams

Arthur Daniel Woods

February, 1907

Floyd Snelson Kidd

COLLEGE OF HOMEOPATHIC MEDICINE

Frederick Alden

George Floyd Bott

John Wilkinson Cogswell

B. S. Iowa, 1904

Charles William Ihle

Ernest Mills Kingsbury

Lester Ambrose Royal

Malcolm Allen Royal

B. S. Iowa, 1904

Murry Wildman

DOCTOR OF DENTAL SURGERY

Mark D. Brown

Bert Lee Christie

Frederic Trenk Daly

Robert Enoch Damon

Jacob Anderson Farlien

Harry Emmons Gibbs

Charles Sidney Horcl

Fred Lee Humeston

Karl Wilson Knapp

Louis Frederick Kruger

Rush Clark Lahman
 Clarence Sylvester Lister
 Arthur John Moravec
 Charles Burton Payne
 Emory Jesse Schultz

Frederick William Schwin
 John William Scovel
 Ansel Reuben Settell
 Julius Frederick Tilden
 Jesse Ward

February, 1907

Theodore Tasheira Roosevelt
 Cleveland Langrage Thomas

Orie Elmer Van Doren
 Claude Linvill Hunsicher

GRADUATE IN PHARMACY

Frank Albert Barta
 Ray Clarke Cochran
 Millard Ray Dickson
 Thomas William Dolan
 Joseph E. Fitzgibbons
 George Arthur Heinrich
 Arthur Johnson
 Howard Garfield Judd
 Joseph Frank Machacek
 Joseph Leonard Magennis
 Roy Kingman Martin

Clee Lane Morrison
 Carl Narum
 Warren Joseph Proctor
 Raymond Everett Richmond
 Milton Cary Sayers
 Fred Conrad Schadt
 Ralph Waldo Sylvester
 John Van Steenbergen
 Fred Jacob Warnecke
 George Edwin Weaver

DOCTOR OF PHILOSOPHY

RUDOLPH MARTIN ANDERSON, B. Ph. Iowa, 1903.

Thesis: "The Birds of Iowa"

HUGH STRAIGHT BUFFUM, B. A. Iowa, 1901; M. A. 1902.

Thesis: "The Disposal of Public Land Grants for Educational Purposes"

CHARLES HOWARD EDMONSON, B. Ph. Iowa, 1903; M. S., 1904.

Thesis: "The Protozoa of Iowa"

DANIEL STARCH, B. A. Charles City College, 1903; M. A. Iowa, 1904.

Thesis: "Perimetry of the Location of Sound"

FREDERICK C. L. VAN STEENDEREN, M. A. Penn College, 1893.

Thesis: "The Translations from the French in Middle-Dutch Literature"

MASTER OF ARTS

CHRISTIAN EMIL BALE, B. A. Luther College, 1904.

Thesis: "The Syntax of the Genitive Case in the Old Northumbrian Gospels"

MARGARET PAULINA CUMMINGS, B. A. Buena Vista College, 1905.

Thesis: "The Gods in the Aeneid of Virgil"

MABEL EVELYN ELLERBROEK, B. Ph. Morningside College, 1905.

Thesis: "Dreams in the Nibelungenlied"

HARRY HOLLAND FITCH, B. A. Iowa, 1902.

Thesis: "The Gender of *Dies*"

JAMES FRANCIS KIRBY, B. Ph. Iowa, 1902; LL.B., 1904.

Thesis: "Public Speaking as a Formative Element in the Making and Adoption of the Constitution of the United States"

PERRY EUGENE MCCLENAHAN, M. Di. Iowa State Normal, 1899; B. Ph. Iowa, 1905.

Thesis: "A Comparative Study of Permanent School Funds"

DAVID JAMES McDONALD, B. A. Western College, 1905.

Thesis: "The Certification of Teachers"

JOHN CARL PARISH, M. Di. Iowa State Normal, 1902; B. Ph. Iowa, 1905.

Thesis: "Governor Robert Lucas"

DANIEL REESE PERKINS, M. Di. Iowa State Normal, 1895; B. Ph. Iowa, 1901.

Thesis: "The Ethnic Religions of the Inhabitants of the Philippine Islands"

DAVID W. RICH, B. A. Iowa, 1902.

Thesis: "The Persuasive Methods of Desmosthenes as Illustrated in the Olynthiac and Philippic Orations"

ALICE RIGBY, B. A. Cornell College, 1902.

Thesis: "The Form of Robert Browning's *Strafford*"

BERTHA SUNIER, B. A. Iowa, 1905.

Thesis: "Seventeenth Century Society According to Boileau's *Satires*"

MASTER OF SCIENCE

RALPH LEONIDAS BYRNES, B. S. Iowa, 1902.

Thesis: "Bacteria in their Relation to Industrial Problems"

JAMES ELLIS GOW, B. Ph. Iowa, 1901.

Thesis: "The Embryology of the Aroids"

LAURENCE ALBERT QUAIPE, B. Ph. Iowa College, 1903.

Thesis: "The Determination of Hepatic Changes, if any, Following Cholecystotomy"

MALCOLM ALLEN ROYAL, B. S. Iowa, 1904.

Thesis: "Pseudo-Parasites"

MAUDE ESTELLA TAYLOR, B. S. Iowa, 1904.

Thesis: "Report on Rare Cases"

CIVIL ENGINEER

RUSSELL T. HARTMAN, B. S. in C. E. Iowa, 1896.

FRANK RICHARD HUBBARD, B. S. in C. E. Iowa, 1896.

BYRON JAMES LAMBERT, B. Ph. Iowa, 1899; B. S. in C. E. 1901; M. S., 1901.

EDWARD R. LEWIS, B. S. Iowa, 1890.

J. OTTO SCHULZE, B. S. in C. E. 1897.

GAYLORD D. WEEKS, B. S. in C. E. Iowa, 1901.

DOCTOR OF LAWS

HON. SCOTT MASON LADD, B. S. Carthage College, 1879; LL. B. Iowa, 1881.

 CERTIFICATES

NURSES' TRAINING SCHOOL

College of Medicine

Isabel Broadie

Mary Regina Rooney

Rena Emily Myers

College of Homoeopathic Medicine

Viola Rosetta Seibert

STUDENTS

The classification of students is indicated by the following abbreviations:

A.S.—College of Applied Science; *Asst.*—Dental Assistants' Courses; *D.*—College of Dentistry; *G.*—Graduate College; *H. M.*—College of Homeopathic Medicine; *L.*—College of Law; *L. A.*—College of Liberal Arts; *M.*—College of Medicine; *Mus.*—School of Music; *N.*—Nurses' Training School; *P.*—College of Pharmacy; *P. R.*—Projected Registration; *Prac.*—Practitioners' Course, Colleges of Dentistry and Pharmacy; *S.*—Summer Session; *s.*—Special; *u.*—Unclassified; 1, 2, 3, 4,—first, second, third, and fourth year, respectively.

Almer Melvin Aanes, <i>H.M.2</i>	Clermont
Claude Elmer Aborn, <i>H.M.3</i>	Cedar Rapids
Adah Louvae Abrams, <i>L.A.3</i>	Iowa City
Albert Wesley Adams, <i>D.2</i>	Eldora
Chester A. Adams, <i>L.2</i>	Akron
Henry Llewellyn Adams, <i>L.2</i>	West Union
B. S. Upper Iowa, 1897; A. M., 1905	
Joseph Quincy Adams, <i>A.S.2</i>	Centerville
Mary Annette Adams, <i>S.</i>	Shelby
B. A. Iowa, 1906	
Robert Perry Adams, <i>L.A.3</i>	Solon
Sadie Maude Adams, <i>S.</i>	Owasa
Alfonso Aguilar, <i>A.S.s</i>	Zacatecas, Mex.
Ernest Julius Aguilar, <i>A.S.2</i>	Mexico City, Mex.
Beulah Ellen Aiken, <i>L.A.1</i>	Carroll
Raymond Aikins, <i>A.S.1</i>	West Liberty
Alison Esther Aitchison, <i>L.A.4</i>	Estherville
M. Di. Iowa State Normal, 1908	
George Roger Albertson, <i>M.1</i>	Moline, Ill.
Esther May Albright, <i>H.M.N.2</i>	Danville
Joseph Raymond Albright, <i>D.1</i>	Grundy Center

Candido Mauricio Alcazar, <i>A.S.2;S.</i>	<i>Iloilo, P. I.</i>
Earl Bergen Alcorn, <i>A.S.s</i>	<i>Finton</i>
Glen Alcorn, <i>L.A.3</i>	<i>Perry, Okla.</i>
Mabel Alexander, <i>L.T.S</i>	<i>Marion</i>
Anna May Allen, <i>L.A.4</i>	<i>Montezuma</i>
George Eugene Allen, <i>L.A.2</i>	<i>Nevada</i>
George Henry Allen, <i>M.4</i>	<i>Harlan</i>
Kathrine Ethel Allen, <i>M.N.1</i>	<i>Keswick</i>
Paul Edward Allen, <i>H.M.1</i>	<i>Washington</i>
Ward Malcolm Allen, <i>L.2</i>	<i>Castalia</i>
William Johnson Allen, <i>L.A.1</i>	<i>Laurens</i>
Alberta Luella Allis, <i>L.A.u</i>	<i>Mason City</i>
Audrie Arle Alspaugh, <i>L.A.1</i>	<i>Chicago, Ill.</i>
Grace E. Alt, <i>L.A.4</i>	<i>Iowa City</i>
Henry John Altfilisch, <i>D.1</i>	<i>Bellvue</i>
Mae Corinne Anders, <i>L.A.4;G.</i>	<i>Iowa Falls</i>
Anne Marie Andersen, <i>S.</i>	<i>Lyons</i>
Albert Anderson, <i>A.S.1</i>	<i>West Liberty</i>
Clara Lenora Anderson, <i>L.A.s.</i>	<i>Ossian</i>
David Allen Anderson, <i>L.A.P.R.</i>	<i>Lamoni</i>
Emma Anderson, <i>M.N.2</i>	<i>Hersher, Ill.</i>
Frank Ervin Anderson, <i>D.2;L.A.u.</i>	<i>Afton</i>
Laura Anderson, <i>G.</i>	<i>Iowa City</i>
Ph. B. Iowa, 1901	
Nina Jeanette Anderson, <i>L.A.2</i>	<i>Harlan</i>
Nora Maude Anderson, <i>L.A.1</i>	<i>Harlan</i>
Paul Oren Anderson, <i>M.1</i>	<i>Jefferson</i>
Pearl Morton Andrie, <i>L.A.s.</i>	<i>North Liberty</i>
Fred Leslie Ankrum, <i>M.3</i>	<i>Hesper</i>
Ph. G. Highland Park College, 1903	
Jacob Charles Anspach, <i>L.A.P.R.</i>	<i>Walnut, Ill.</i>
Ernest Joseph Anthony, <i>M.2</i>	<i>Iowa City</i>
Harry Byron Jacob Anton, <i>L.A.s.</i>	<i>LaPorte City</i>
Floyd Henry Arnold, <i>L.A.3</i>	<i>Manchester</i>
John Beach Arthur, <i>L.A.1</i>	<i>Cedar Rapids</i>
William Richard Arthur, <i>M.4</i>	<i>Hampton</i>
Sidney John Artt, <i>L.A.1</i>	<i>Leon</i>
William Thomas Artt, <i>L.A.s</i>	<i>Leon</i>
Charles Fred Aschenbrenner, <i>D.1</i>	<i>Covina, Cal.</i>
Blanche Agnes Ashton, <i>L.A.3</i>	<i>Fort Dodge</i>

Benjamin Sherman Asquith, <i>L.A.3</i> M. Di. Iowa State Normal, 1902	<i>Iowa City</i>
Clarence Ray Aurner, <i>G. P. R.; S.</i> M. Di. Iowa State Normal, 1891; B. Ph. Iowa, 1903	<i>Tipton</i>
Nellie Slayton Aurner, <i>G.P.R.;S</i> Ph. B. Iowa, 1903	<i>Tipton</i>
Olga Averkieff, <i>M.4</i>	<i>Vermillion, S. D.</i>
George Emery Avery, <i>D.2</i>	<i>Canon City, Colo.</i>
Roscoe Blaine Ayers, <i>L.A.1</i>	<i>Iowa City</i>
Erma Alicia Babcock, <i>S.</i> B. A. Monmouth College, 1905	<i>Wyoming</i>
Fred George Baender, <i>A.S.u.</i>	<i>Oakland, Calif.</i>
DeWitt Baer, <i>M.3</i>	<i>Harlan</i>
Adeline Bagby, <i>L.T.S.</i>	<i>Paducah, Ky.</i>
Bert Hield Bailey, <i>G.P.R.</i> B. S. Coe College, 1897; M. S., 1900; M. D. Rush Medical College, 1900	<i>Cedar Rapids</i>
Edmund H. Bailey, <i>A.S.1</i>	<i>Marengo</i>
Frederick William Bailey, <i>G.</i> B. S. Iowa, 1902; M. S., 1904; M. D., 1905	<i>Iowa City</i>
Hugh Lee Bailey, <i>L.3</i>	<i>Iowa City</i>
Jessie Edith Bailey, <i>L.A.u.</i>	<i>Washington</i>
Sadie Lydia Bailey, <i>L.A.3</i>	<i>Iowa City</i>
Margaret May Baines, <i>L.A.2; Mus.</i>	<i>What Cheer</i>
Otto Clarence Baird, <i>M.1</i>	<i>Morning Sun</i>
John Elmer Baker, <i>M.3</i>	<i>Sumner</i>
Katharine Alice Baker, <i>L.A.1</i>	<i>Marengo</i>
Lloyd Lewis Baker, <i>D.2</i>	<i>Brooklyn</i>
Norman Merrill Baker, <i>A.S.3</i>	<i>Davenport</i>
Christian Emil Bale, <i>G.P.R.</i> B. A. Luther College, 1904; M. A. Iowa, 1906	<i>Glenwood, Minn.</i>
Edith Ball, <i>L.A.3</i>	<i>Iowa City</i>
Walter McDowell Ball, <i>L.2</i>	<i>Iowa City</i>
George Henry Ballard, <i>S.</i> M. Di. Iowa State Normal, 1900; B. S. Iowa, 1904; M. A., 1904	<i>Charles City</i>
Sotero Baluyut, <i>A.S.2</i>	<i>San Fernando, P. I.</i>
Samuel George Bammer, <i>L.A.3</i>	<i>Hamburg</i>
George Louis Bammert, <i>D.1</i>	<i>Lansing</i>
John Meinrad Bammert, <i>M.u.</i>	<i>Lansing</i>
Albert James Banta, <i>A.S.3</i>	<i>Lamoni</i>
Ethel Barber, <i>L.A.1</i>	<i>Chicago, Ill.</i>
Carrie Ola Barker, <i>L.T.S.</i>	<i>Hampton</i>

Ernest Edward Barker, <i>M.4</i>	<i>Iowa City</i>
Charles Robert Barnard, <i>L.3</i>	<i>Clarion</i>
Ph. B. Iowa College, 1904	
Harlan Ward Barnea, <i>L.A.4</i>	<i>Eagle Grove</i>
Reu Lee Barnett, <i>M.4</i>	<i>Weston</i>
George Woodward Barr, <i>L.1</i>	<i>Clarksville</i>
Anna E. Barrett, <i>S.</i>	<i>Rowley</i>
Edward Cecil Barrett, <i>L.2</i>	<i>Burlington</i>
B. A. Iowa, 1906	
Lydia Margaret Barrette, <i>L.T.S.</i>	<i>Davenport</i>
B. A. Cornell College, 1908	
John H. Barrick, <i>D.1</i>	<i>Storm Lake</i>
Charlotte Margaret Barrow, <i>L.A.1</i>	<i>Iowa City</i>
Ida Gertrude Barrow, <i>L.A.2</i>	<i>Iowa City</i>
Mary Modestas Barrow, <i>L.A.4;S.</i>	<i>Iowa City</i>
Adelaide Nellie Barry, <i>Mus.;S.</i>	<i>Iowa City</i>
Agnes Mildred Barry, <i>L.A.3;S.</i>	<i>Iowa City</i>
Josephine Mary Barry, <i>L.A.2</i>	<i>Iowa City</i>
Katherine Ruth Barry, <i>L.A.u.</i>	<i>Burlington</i>
William James Barry, <i>L.A.s.;S.</i>	<i>Iowa City</i>
William John Barry, <i>L.A.u.</i>	<i>Iowa City</i>
Frank Albert Barta, <i>M.1</i>	<i>Fairfax</i>
Ph. G. Iowa, 1906	
Hugh Pierce Barton, <i>M.1</i>	<i>Elkader</i>
James Frank Barton, <i>L.3</i>	<i>Fort Dodge</i>
Ernest Roscoe Baskerville, <i>L.3</i>	<i>Iowa Falls</i>
Howard William Bateman, <i>M.4</i>	<i>Hayward, Wis.</i>
Donald Mack Bateson, <i>L.A.1</i>	<i>Eldora</i>
Henry John Baum, <i>A.S.3</i>	<i>Stone City</i>
Glen Horace Beaman, <i>L.1</i>	<i>Monrovia, Calif.</i>
Arthur H. Beard, <i>A.S.u.</i>	<i>Cheyenne, Wyo.</i>
Thomas Alfred Beardmore, <i>L.2;L.A.u.</i>	<i>Dorchester</i>
George Statler Beasley, <i>L.A.s.</i>	<i>Marshalltown</i>
Carl John Beatty, <i>A.S.1</i>	<i>Avoca</i>
Ralph Erwin Beatty, <i>L.1;L.A.u.</i>	<i>Tipton</i>
Leo Victor Beaulieu, <i>G.P.R.</i>	<i>Sheldon</i>
B. A. Iowa, 1904; M. A., 1906	
Lake Marshall Bechtell, <i>L.1;L.A.u.</i>	<i>Mitchellville</i>
Roy August Becker, <i>H.M.1</i>	<i>Elgin</i>
Wilhelmina M. Becker, <i>L.A.4</i>	<i>Hubbard</i>
Ethel Effie Beebe, <i>L.A.4</i>	<i>Wever</i>

Frances Helen Beem, <i>L.A.1</i>	<i>Marengo</i>
Joe Spencer Beem, <i>L.A.3</i>	<i>Marengo</i>
Edna Florence Behrend, <i>L.A.1;Mus.</i>	<i>Auburn</i>
Clark Hiram Belknapp, <i>L.1</i>	<i>Iowa City</i>
B. Ph. Upper Iowa, 1898; M. A., 1906	
Walter Wallace Bell, <i>S.</i>	<i>Fonda</i>
Earle Delmar Bellamy, <i>L.A.3</i>	<i>Knoxville</i>
Charles Eugene Beltzer, <i>M.2</i>	<i>Osceola, Neb.</i>
George Arthur Bemis, <i>M.3</i>	<i>Spencer</i>
Hazel Lauretta Bemis, <i>L.A.s.</i>	<i>Estherville</i>
Byron Irving Benedict, <i>M.4</i>	<i>Ida Grove</i>
Edgar T. Benedict, <i>M.1</i>	<i>Ida Grove</i>
Ruby Hazel Benner, <i>L.A.1</i>	<i>Des Moines</i>
Perry Hazard Benson, <i>L.A.2</i>	<i>Brooklyn</i>
Dean Bergen, <i>L.A.1</i>	<i>Dubuque</i>
Alfred Raymond Berry, <i>L.2</i>	<i>Mount Vernon</i>
B. A. Cornell College, 1905	
Grace Ellen Berry, <i>L.A.1</i>	<i>Iowa City</i>
John Williams Berry, <i>A.S.4</i>	<i>Iowa City</i>
Katharine Berryhill, <i>L.A.1;Mus.</i>	<i>Des Moines</i>
Rufus Preston Beshears, <i>D.1</i>	<i>St. Joseph, Mo.</i>
Daniel Bettice, <i>D.3</i>	<i>Independence</i>
Louise G. Beucher, <i>L.A.2</i>	<i>Postville</i>
Albert Lee Beverly, <i>L.1</i>	<i>Ames</i>
Nathan Sidney Bevins, <i>S.</i>	<i>Hawkeye</i>
B. S. Iowa, 1906	
G. G. Bickley, <i>L.A.2</i>	<i>Waterloo</i>
Mariano Billedo, <i>S.</i>	<i>Bangue, P. I.</i>
Frank M. Billings, <i>A.S.1</i>	<i>Keithsburg, Ill.</i>
Carl Ellis Bingham, <i>A.S.s.</i>	<i>Waterloo</i>
Edward William Bittner, <i>M.4</i>	<i>Solon</i>
Guy Cameron Black, <i>D.3</i>	<i>Alexandria, Pa.</i>
John Roland Black, <i>M.1</i>	<i>Jefferson</i>
Mabel Black, <i>L.A.3;S.</i>	<i>Shellsburg</i>
William Henry Blakely, <i>S.</i>	<i>Livermore</i>
William Albert Blackwell, <i>G.</i>	<i>Sparland, Ill.</i>
B. Ph. Morningside College, 1905	
John M. Bladen, <i>P.1</i>	<i>Cedar City, Utah</i>
Jennie Isabel Blake, <i>L.A.2</i>	<i>Iowa City</i>
Cliff Lenard Blakely, <i>M.1</i>	<i>Montezuma</i>
Antone Blezek, <i>L.2</i>	<i>Oxford Junction</i>

Margaret Mary Blythe, <i>L.A.s.</i>	<i>Williamsburg</i>
Robert Russell Boag, <i>L.A.s.</i>	<i>Milton</i>
Herman Carl Bohn, <i>L.A.1</i>	<i>Waverly</i>
Fred De Witt Boice, <i>L.A.s.</i>	<i>Cheyenne, Wyo.</i>
Arthur Edward Boland, <i>M.2</i>	<i>Williamsburg</i>
James McNamara Boland, <i>L.3</i>	<i>Dubuque</i>
Frances Bolks, <i>M.N.2</i>	<i>Cedar Rapids</i>
Harry Garrett Bolks, <i>D.1</i>	<i>Cedar Rapids</i>
Ora Frank Boller, <i>D.2</i>	<i>Wayland</i>
Hamilton Arno Bolstad, <i>D.1</i>	<i>Viroqua, Wis.</i>
Merle Bone, <i>M.4</i>	<i>Albia</i>
Frank Allen Boner, <i>D.1</i>	<i>Danville</i>
Robert Peter Booker, <i>D.1</i>	<i>Utr</i>
Clara Atwood Boss, <i>S.</i>	<i>Cedar Falls</i>
<i>M. Di. Iowa State Normal, 1895; B. A. Iowa, 1906</i>	
William Raymond Bosworth, <i>A.S.3</i>	<i>Webster City</i>
Harry Edwin Boudinot, <i>A.S.1</i>	<i>Davenport</i>
Thomas Scott Bovell, <i>G.P.R.</i>	<i>Burlington</i>
<i>B. A. Shurtleff College, 1879; B. D., 1881</i>	
Mabel Meardon Bowen, <i>L.A.1</i>	<i>Iowa City</i>
Mary Charlotte Bowen, <i>L.A.2</i>	<i>Waukon</i>
Cecil Claude Bowie, <i>M.4</i>	<i>Atalissa</i>
Clarence Henry Bowman, <i>A.S.4</i>	<i>Solon</i>
Ronald Dwight Bowman, <i>L.2</i>	<i>Leon</i>
Bert Caleb Boylan, <i>L.A.3;S.</i>	<i>Waucoma</i>
Edna Bracewell, <i>L.A.4</i>	<i>Allerton</i>
Esther Bracewell, <i>L.A.u.;S.</i>	<i>Allerton</i>
Hollie Broughton Bracewell, <i>L.3;G.</i>	<i>Corydon</i>
<i>B. Ph. Michigan, 1889</i>	
Benjamin Graham Bradley, <i>A.S.3</i>	<i>Iowa City</i>
Carolyn Margaret Bradley, <i>L.A.u.;S.</i>	<i>Iowa City</i>
Frank Timothy Bradley, <i>M.3</i>	<i>Iowa City</i>
Julia Hobbs Braginton, <i>S.</i>	<i>Manson</i>
Charles Lucian Brainerd, <i>A.S.2</i>	<i>Iowa City</i>
Howard Hatch Brainerd, <i>L.A.4;L.u.</i>	<i>Iowa City</i>
Ossian Edward Brainerd, <i>A.S.1</i>	<i>Iowa City</i>
Parke Brandmill, <i>L.A.s.</i>	<i>Elma</i>
Herbert Oscar Brandt, <i>M.2</i>	<i>Rock Rapids</i>
Clark Craig Branson, <i>A.S.s.</i>	<i>Thornburg</i>
Pearl Gertrude Branson, <i>L.A.3</i>	<i>Iowa City</i>

STUDENTS

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Laura House Branson, G.	<i>Iowa City</i>
M. D. Iowa, 1885; B. S., 1901; M. S., 1904	
Irving Newton Brant, L.A.3;S.	<i>Iowa City</i>
William Breen, M.4	<i>Monticello</i>
Garfield Eugene Breese, L.2;S.	<i>Iowa City</i>
Lauretta Moselle Breese, L.A.2	<i>Iowa City</i>
Clara Anna Brennan, L.A.3;S.	<i>Iowa City</i>
Ida Mae Brewer, L.A.4;S.	<i>Traer</i>
M. Di. Iowa State Normal, 1898	
Calvin Orville Brewster, H.M.2	<i>Hampton</i>
John Guy Bridgens, L.A.4;L.1	<i>Eldora</i>
Charles William Briggs, L.A.2	<i>Wapello</i>
Dana Everett Brinck, L.3	<i>Mount Vernon</i>
B. Ph. Cornell College, 1903	
Blanche Viola Woods Brink, P.2	<i>Doon</i>
Charles Clifton Brink, L.A.2	<i>Doon</i>
Hal Loder Brink, L.u.	<i>Iowa City</i>
Grace Brinton, S.	<i>Iowa City</i>
Chancey Lee Brittell, M.4	<i>Maquoketa</i>
Jane Isabel Broadie, M.N.3	<i>Fredericksburg</i>
Clara Isabell Broderick, L.A.1	<i>Newton</i>
Hilda Louise Brodersen, L.A.3	<i>Denison</i>
Clifford Hugh Brooks, M.1	<i>Audubon</i>
William Wesley Brothers, L.A.s.	<i>Marshalltown</i>
Homer Brower, L.A.1	<i>Middletown</i>
Andrew Dobbie Brown, L.A.3	<i>Atlantic</i>
Burr Arthur Brown, L.A.2	<i>Waterloo</i>
Carl Eben Brown, D.u.	<i>Anamosa</i>
Carl Harrison Brown, H.M.1	<i>Grand Ledge, Mich.</i>
Harry Weller Brown, M.4	<i>Waterloo</i>
William Ebenezer Brown, L.A.u.	<i>Tipton</i>
William O. L. Brown, L.A.s.	<i>Iowa City</i>
James Roy Brownlie, A.S.1	<i>Davenport</i>
Henry Nicholas Bruechert, M.3	<i>Schapville, Ill.</i>
Francis Albert Brugman, M.2	<i>Davenport</i>
Joseph Charles Brugman, M.1	<i>Iowa City</i>
Catherine Caroline Brunnier, M.N.1	<i>Manning</i>
Milo Orion Brush, H.M.3	<i>Pipestone, Minn.</i>
Alvin Wesley Bryan, D.1	<i>Mapleton</i>
Harold Lewis Bryson, L.A.4	<i>Iowa City</i>
Dean Winslow Buchan, S.	<i>Grundy Center</i>

John Bishop Buchanan, <i>D.G.</i>	<i>Sandpoint, Ida.</i>
D. D. S. Pacific Dental College, 1893	
Grace Emma Buckley, <i>L.A.4</i>	<i>Shelby</i>
Chester Arthur Buckner, <i>L.A.2</i>	<i>Iowa City</i>
Harry Erwin Buffum, <i>L.A.1</i>	<i>Le Roy</i>
Hugh Straight Buffum, <i>G.;S.</i>	<i>Le Roy</i>
B. A. Iowa, 1901; M. A., 1902; Ph. D., 1906	
Dean S. Burbank, <i>M.2;S.</i>	<i>Oxford</i>
George Francis Buresh, <i>L.1;G.</i>	<i>Cedar Rapids</i>
B. Ph. Coe College, 1904	
Albertus Joseph Burge, <i>S.</i>	<i>Iowa City</i>
B. S. Iowa, 1897; M. S., 1899; M. D., 1900	
Edith Burge, <i>S.</i>	<i>Iowa City</i>
B. A. Iowa, 1906	
Jennie Burge, <i>L.A.4</i>	<i>Iowa City</i>
John Everett Burgy, <i>L.1</i>	<i>Marengo</i>
Frank Oscar Burk, <i>M.4</i>	<i>Davenport</i>
John Anson Burket, <i>M.4</i>	<i>Hawarden</i>
Ira Arthur Burkheimer, <i>A.S.3</i>	<i>Creston</i>
Bert Blaine Burnquist, <i>L.3</i>	<i>Fort Dodge</i>
B. Ph. Iowa, 1905	
Richard Earl Burns, <i>M.3</i>	<i>Ida Grove</i>
Chester De Witt Burrell, <i>L.A.1</i>	<i>Epworth</i>
Benjamin Franklin Butler, <i>L.A.1</i>	<i>Muscatine</i>
Harry Butler, <i>L.A.1</i>	<i>Fort Dodge</i>
Clifford Guy Butterfield, <i>D.1</i>	<i>Vinton</i>
Julian Edward Butterworth, <i>L.A.4;G.</i>	<i>Dows City</i>
Louie Virgil Butterworth, <i>A.S.a.</i>	<i>Dows City</i>
Charles Edwin Butts, <i>M.3</i>	<i>Monterey</i>
Katherine Louise Buxbaum, <i>L.A.3</i>	<i>Washington</i>
Mildred Laurine Buxxa, <i>L.A.1</i>	<i>Marion</i>
Ralph De Motte Byerly, <i>A.S.u.</i>	<i>Pocahontas</i>
Ford L. Byers, <i>D.1</i>	<i>Adair</i>
Harold Charleston Byers, <i>D.1</i>	<i>Newton</i>
Carl Robert Byoir, <i>L.A.1</i>	<i>Des Moines</i>
Joseph Beauregard Bywater, <i>H.M.3</i>	<i>Garrin</i>
Joseph Maxwell Cadwallader, <i>M.4</i>	<i>Ottumwa</i>
Maurice Patrick Cahill, <i>L.1</i>	<i>Fairfax</i>
Merlyn Bush Call, <i>S.</i>	<i>Iowa City</i>
B. A. Iowa, 1905	
Ellis Percy Callegari, <i>D.2</i>	<i>Cottonport, La.</i>

James Lloyd Cameron, <i>L.A.2</i>	<i>Audubon</i>
Bessie Ann Campbell, <i>M.N.2</i>	<i>Mount Pleasant</i>
Thomas Roy Campbell, <i>M.2</i>	<i>McHenry, N. D.</i>
Vicente Camporredondo, <i>A.S.1</i>	<i>Vera Cruz, Mex.</i>
Mary Gertrude Canavan, <i>S.</i>	<i>Gowrie</i>
Lois Christine Cauty, <i>L.A.1</i>	<i>Logan</i>
William Lawrence Carberry, <i>L.A.2</i>	<i>Panora</i>
Cecil Earl Carl, <i>D.3</i>	<i>Lone Tree</i>
Evan Elsworth Carl, <i>L.A.2</i>	<i>Nichols</i>
Henry Howard Carl, <i>A.S.3</i>	<i>Newton</i>
Alexander Ulysses Carlson, <i>A.S.3</i>	<i>Humboldt</i>
Clara Carlson, <i>M.1</i>	<i>Beresford, S. D.</i>
Agnes Estelle Carney, <i>L.A.1</i>	<i>New Hampton</i>
Foster De Witt Carney, <i>D.2</i>	<i>Yankton, S. D.</i>
Porter Harman Carpenter, <i>M.1</i>	<i>Iowa City</i>
Claude William Carr, <i>L.A.1</i>	<i>Maquoketa</i>
Victor Carris Carr, <i>M.1</i>	<i>Wellman</i>
Dale Everett Carrell, <i>L.A.2;S.</i>	<i>Iowa City</i>
Edward Albert Carter, <i>M.4</i>	<i>Muchakinock</i>
B. Ph. Iowa, 1903	
Edwin Otis Carter, <i>D.2</i>	<i>Nevada</i>
Leah Mary Carter, <i>L.A.1</i>	<i>Hubbard</i>
William Bernard Casey, <i>P.1</i>	<i>Floyd</i>
Edward Mike Cassady, <i>L.A.2</i>	<i>Whiting</i>
Mark Seavey Catlin, <i>L.1</i>	<i>Iowa City</i>
B. Ph. Chicago, 1905	
Lucy Mary Cavanagh, <i>G.</i>	<i>Iowa City</i>
B. S. Iowa, 1896	
Charles Elmer Cave, <i>G.;S</i>	<i>Ames</i>
B. A. Upper Iowa, 1904	
Elsie Marie Cerny, <i>L.A.2</i>	<i>Iowa City</i>
Sylvia Anna Chamberlain, <i>L.A.2</i>	<i>Grinnell</i>
Catharyne Clara Chambers, <i>L.A.1</i>	<i>West Union</i>
Sidney Levi Chandler, <i>G.P.R.;S.</i>	<i>Ida Grove</i>
B. A. Morningside College, 1899; M. A., 1901	
Ethel Charlton, <i>G.</i>	<i>Clear Lake</i>
B. Ph. Iowa, 1896	
Max Rosecrans Charlton, <i>G. P. R.</i>	<i>Clear Lake</i>
B. S. Iowa, 1903; M. S., 1905; M. D., 1906	
Eugene Webster Chase, <i>L.A.u.</i>	<i>Clear Lake</i>
Carl Clayton Chatterton, <i>M.1</i>	<i>Peterson</i>

Mary Grove Chawner, G.	<i>Indianapolis, Ind.</i>
A. B. Penn College, 1896; M. A. Iowa, 1904	
Frank James Check, Jr., D.3	<i>Cedar Rapids</i>
Julia Cherny, H.M.N.1	<i>Osage</i>
Lydia Delphina Christensen, L.A.1	<i>Harlan</i>
Louis Carl Christiansen, A.S.1	<i>Tipton</i>
Edward Perry Churchill, L.A.4	<i>Sewall</i>
Florence Irene Mary Churchill, L.A.1	<i>Iowa City</i>
Clara Frances Clair, L.A.u.	<i>Iowa City</i>
Atherton Brockway Clark, L.A.1	<i>Cedar Rapids</i>
Dan Elbert Clark, L.A.4	<i>Sioux City</i>
Hattie Young Clark, L.A.u.	<i>Iowa City</i>
James George Clark, L.1	<i>Waverly</i>
Leslie William Clark, M.2	<i>Maquoketa</i>
Marshall E. Clark, P.1	<i>Cedar Rapids</i>
Mildred Louise Clark, L.A.4	<i>Cleveland, Ohio</i>
Robert William Clark, L.1	<i>Ute</i>
Romane Olds Clark, L.A.s.	<i>Waverly</i>
Roscoe Orland Clark, P.1	<i>Orient</i>
Alice Elizabeth Clarke, L.A.1	<i>Burlington</i>
Timothy John Clarke, A.S.3	<i>Clinton</i>
Anna Dorothy Claussen, L.A.4	<i>Shelby</i>
Albert Edward Clearman, A.S.3	<i>Iowa City</i>
Guy Harvey Clemons, D.2	<i>Alta</i>
Talley McClellan Clevenger, L.A.u.	<i>Brooklyn</i>
Charles Logan Closson, M.2	<i>Independence</i>
Paul Noice Coates, A.S.s.	<i>Iowa Falls</i>
Edwin Cobb, L.A.3	<i>Independence</i>
Elliott Cunningham Cobb, L.A.1	<i>Harlan</i>
John Wright Coburn, L.1; L.A.u.	<i>Marcus</i>
William Karl Cocklin, M.4	<i>Ainsworth</i>
William Ellsworth Cody, Jr., L.A.u.	<i>Sioux City</i>
Isabel Catharine Coc, M.N.2	<i>Le Claire</i>
Sumner Cogswell, L.A.1	<i>Rock Valley</i>
Jasper Freeman Cole, D.1	<i>Aurora, Neb.</i>
Jay Tilden Colegrove, L.A.3	<i>Russell</i>
M. Di. Iowa State Normal, 1905	
Ray Clare Coleman, L.A.s.; S	<i>Dolliver</i>
Charles Chapman Collester, M.2	<i>Spencer</i>
Samuel Williamson Collett, G.P.R.	<i>Iowa City</i>
B. S. Moore's Hill College, 1886; M. S., 1894	

STUDENTS

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William Hunter Collin, <i>L.A.1</i>	<i>Northwood</i>
Benjamin Palmer Collins, <i>L.A.2</i>	<i>Livermore</i>
Edward Robert Collins, <i>S.</i>	<i>Bloomfield</i>
B. S. Iowa, 1902; M. A., 1903	
William Collinson, <i>L.3</i>	<i>Chariton</i>
Ross Hunter Comly, <i>A.S.1</i>	<i>Iowa Falls</i>
John Wesley Conaway, <i>L.A.3</i>	<i>Marcus</i>
Kathryn Conaway, <i>L.A.u.</i>	<i>Marcus</i>
Gilbert Holmes Condit, <i>A.S.1</i>	<i>Westhope, N. D.</i>
John Vincent Condon, <i>P.2</i>	<i>Walnut</i>
Edward Garfield Connor, <i>A.S.2</i>	<i>Humboldt</i>
Titus Anderson Conrad, <i>G.</i>	<i>Swedona, Ill.</i>
B. A. Gustavus Adolphus College, 1901; B. D. Augustana College, 1904	
Earl Lester Consoliver, <i>A.S.1</i>	<i>Adair</i>
Myra Harriet Converse, <i>L.A.2</i>	<i>Iowa City</i>
Frank Henry Conway, <i>P.2</i>	<i>Oelwein</i>
Fred Sutton Cook, <i>M.4</i>	<i>Davenport</i>
Laura Estella Cook, <i>L.T.S.</i>	<i>Chariton</i>
Mary Ora Cook, <i>L.A.u.; Mus..</i>	<i>Shelby</i>
Robert Jay Cook, <i>L.A.2</i>	<i>Independence</i>
Lester Berle Coon, <i>D.2</i>	<i>Newton</i>
Linne Eleanor Coon, <i>L.A.1</i>	<i>Des Moines</i>
John Clyde Coonrod, <i>A.S.1</i>	<i>Mediapolis</i>
Flora Evelyn Cooper, <i>L.A.2</i>	<i>Council Bluffs</i>
Mary M. Corbett, <i>L.A.1</i>	<i>Iowa City</i>
Thomas Francis Corbett, <i>L. A.u.</i>	<i>Iowa City</i>
Guy C. Core, <i>L.A.u.</i>	<i>Grand Ridge, Ill.</i>
Chester Corey, <i>L.A.s.</i>	<i>Iowa City</i>
Corwin Schaffner Cornell, <i>L.A.2</i>	<i>Knoxville</i>
Ethel Louise Cornell, <i>L.A.s.</i>	<i>Keosauqua</i>
Jessie Correll, <i>M.1</i>	<i>Adair</i>
Ignatia Corso, <i>L.A.4;S.</i>	<i>Iowa City</i>
Michael Charles Coughlon, <i>L.2</i>	<i>Fort Dodge</i>
Clarence Frank Coulter, <i>L.A.1</i>	<i>Iowa City</i>
Elmer Wilson Courson, <i>L.A.1</i>	<i>Clarion</i>
Erma Mary Cowgill, <i>L.A.s.</i>	<i>West Branch</i>
Claude Ham Coyle, <i>L.A.4</i>	<i>Humboldt</i>
LL.B. Humboldt College Law School, 1903	
Mabel Hatton Coyle, <i>L.A.u.</i>	<i>Humboldt</i>
Edna Mable Cozine, <i>L.A.3</i>	<i>Iowa City</i>

Lue Donald Cramblet, <i>M.2</i>	<i>Dudley</i>
Archie West Crary, <i>G.</i>	<i>Boone</i>
B. S. Cornell College, 1897; LL. B. Iowa, 1904; M. D., 1906	
Matthewy Owen Crawford, <i>D.u.</i>	<i>Keota</i>
Nelson Antrim Crawford, Jr., <i>L.A.3</i>	<i>Council Bluffs</i>
Frank Harrison Creamer, <i>M.3</i>	<i>Belle Plaine</i>
Earl Elliott Cress, <i>M.1</i>	<i>Riverside</i>
Merritt William Cressler, <i>L.A.s.</i>	<i>Scranton</i>
Fred Warren Crichfield, <i>D.2</i>	<i>Weldon</i>
Grace Cathryn Crockett, <i>L.A.4</i>	<i>Iowa City</i>
Hazel Crockett, <i>L.A.u.;S.</i>	<i>Iowa City</i>
Emory Arnett Cromer, <i>G.P.R.;S.</i>	<i>Union</i>
B. Ph. Cornell College, 1891	
Charles Fletcher Cron, <i>H.M.1</i>	<i>Gladbrook</i>
Cyril McLane Cron, <i>H.M.3</i>	<i>Gladbrook</i>
John Francis Cronin, <i>L.3</i>	<i>Marengo</i>
Lucius Crosby, <i>D.2</i>	<i>Clarksville</i>
Lillian Pearl Cross, <i>L.A.3</i>	<i>Vinton</i>
Orval Alexander Crossan, <i>D.2;L.A.u.</i>	<i>Dayton</i>
Stephen Edward Crouter, <i>D.2</i>	<i>Custer, S. D.</i>
Guy A. Crow, <i>L.u.</i>	<i>Mapleton</i>
Ira Nelson Crow, <i>M.3</i>	<i>Middle River</i>
Rose Winifred Crowley, <i>M.N.2</i>	<i>Des Moines</i>
Lilah B. Crum, <i>L.A.1</i>	<i>Bedford</i>
Shelby Cullison, <i>L.2</i>	<i>Harlan</i>
Fred Joseph Cunningham, <i>L.A.4;L.1</i>	<i>Allerton</i>
Alice Bertha Curtis, <i>G.P.R.</i>	<i>Allison</i>
B. Ph. Iowa, 1903	
*Edna Anna Maria Curtis, <i>M.N.2</i>	<i>Independence</i>
Edna Leslie Curtis, <i>L.T.S.</i>	<i>Jacksonville</i>
Lewis Demain Curtis, Jr. <i>S.</i>	<i>Center Point</i>
M. Di. Iowa State Normal, 1901	
Raymond George Cushing, <i>L.3</i>	<i>Exira</i>
B. A. Iowa, 1904	
Moe Andrew Cushman, <i>L.u.</i>	<i>Waterloo</i>
Neal De Bey, <i>D.2</i>	<i>Orange City</i>
Oliver Howard DeGroote, <i>L.1;L.A.u.</i>	<i>Humboldt</i>
Roy De Kruif, <i>D.1</i>	<i>Orange City</i>
Philip Kirby De Voe, <i>A.S.1</i>	<i>Creston</i>
Clara May Daley, <i>L.A.4;G.;S.</i>	<i>Charles City</i>
M. Di. Iowa State Normal, 1905	

*Deceased

Lucile Bine Danforth, <i>L.A.2;Mus.</i>	<i>Winterset</i>
Virgil Emery Daniel, <i>A.S.s.</i>	<i>Murray</i>
Guy Emmett Daniels, <i>L.A.1</i>	<i>Gilmore City</i>
Robert Raymond Daniels, <i>A.S.1</i>	<i>Waterloo</i>
William Harrison Daniels, <i>M.1</i>	<i>Williamsburg</i>
Fred Lambert Darland, <i>M.4</i>	<i>Iowa City</i>
Ph. G. Drake, 1902	
Harry Riley Darling, <i>D.2</i>	<i>Harrisburg, S. D.</i>
Lemuel Luther Darner, <i>A.S.1</i>	<i>Ottumwa</i>
Bernard Henry Davis, <i>P.2</i>	<i>Onawa</i>
Charles Franklin Davis, <i>L.A.3</i>	<i>Iowa City</i>
Harry Scott Davis, <i>D.2</i>	<i>Manchester</i>
Minnie Davis, <i>L.T.S.</i>	<i>Marion</i>
Ross Elder Davis, <i>L.A.1</i>	<i>Spirit Lake</i>
Walter Clarence Davis, <i>D.3</i>	<i>Oskaloosa</i>
Darline Dawson, <i>L.A.1</i>	<i>Adel</i>
Caroline Belle Day, <i>S.</i>	<i>Corydon</i>
Frank H. Day, <i>A.S.1</i>	<i>Clarion</i>
James Edward Day, <i>L.A.1</i>	<i>Des Moines</i>
Anna Elizabeth Deady, <i>L.A.u.</i>	<i>Chicago, Ill.</i>
Basil Dean, <i>A.S.4</i>	<i>Spencer</i>
Henry Herman Dean, <i>A.S.s.</i>	<i>Glenwood</i>
Henry Clay Deily, Jr., <i>M.3</i>	<i>Calmar</i>
Maude Delmege, <i>L.A.u.;Mus.</i>	<i>Des Moines</i>
Eugene Vincent Denault, <i>D.2</i>	<i>Fulton, Ill.</i>
Harry Cecil Denhart, <i>A.S.s.</i>	<i>White, S. D.</i>
Nancy Gertrude Denhart, <i>L.A.s.</i>	<i>White, S. D.</i>
Charles Carroll Denio, <i>L.A.1</i>	<i>Alta</i>
Carlton Leroy Dennis, <i>A.S.2</i>	<i>Clinton</i>
Gertrude Dennis, <i>L.A.3</i>	<i>Iowa City</i>
John Denzler, <i>D.2</i>	<i>Marengo</i>
Grover Edward Desmond, <i>L.1</i>	<i>Clinton</i>
William Henry Dessel, <i>A.S.2</i>	<i>Ida Grove</i>
Estella Detrick, <i>L.T.S.</i>	<i>York, Neb.</i>
John Andrew Devine, <i>M.3</i>	<i>Sigourney</i>
Frank Leroy Dewees, <i>H.M.1</i>	<i>Springdale</i>
Harland Everett Dice, <i>H.M.3</i>	<i>West Liberty</i>
William J. Ackerman Dickenson, <i>A.S.u.</i>	<i>Sioux Falls, S. D.</i>
Grace Myrtle Diddy, <i>S.</i>	<i>Perry</i>
Ernest Oscar Dietrich, <i>D.1</i>	<i>Rock Rapids</i>

Clarence Will Diltz, <i>A.S.1</i>	<i>Cedar Rapids</i>
Mekael Diratzouian, <i>D.2;G.</i>	<i>Smyrna, Turkey</i>
Frederic Louis Diserens, Jr., <i>A.S.a.</i>	<i>Cedar Rapids</i>
Arthur Dixon, <i>M.4</i>	<i>Worcester, Mass.</i>
George Edward Dixon, <i>D.2</i>	<i>Sheldon</i>
Clara Doll, <i>G.</i>	<i>Iowa City</i>
B. A. Iowa, 1906	
George Francis Dolmage, <i>M.2</i>	<i>Iowa City</i>
John Peter Dolmage, <i>A.S.2</i>	<i>Iowa City</i>
Pearl Domina, <i>P.1</i>	<i>Valley, Neb.</i>
John Donahue, <i>D.1</i>	<i>Winterset</i>
John Kirkwood Donaldson, <i>D.1</i>	<i>Audubon</i>
Michael Leo Donavan, <i>L.1</i>	<i>Oxford</i>
Lela Elizabeth Donnelly, <i>L.A.1</i>	<i>Ryan</i>
Katharine Hazel Donovan, <i>L.A.1</i>	<i>Des Moines</i>
William Henry Donovan, <i>M.4</i>	<i>Oxford</i>
Benjamin Butler Doran, <i>L.u.;L.A.u.</i>	<i>Beaver</i>
Thomas Cyrus Doran, <i>M.4</i>	<i>Des Moines</i>
Alexander McLeod Milligan Dornon, <i>S.</i>	<i>Osceola</i>
George Dolts, <i>A.S.s.</i>	<i>Eddyville</i>
Lawrence G. Doty, <i>L.A.1</i>	<i>Garwin</i>
Etta Viola Douglas, <i>M.N.1</i>	<i>Oxford</i>
Ezekiel Henry Downey, <i>L.A.4</i>	<i>Memphis, Mo.</i>
B. S. Southern Iowa Normal, 1898	
Carle Downing, <i>A.S.u.</i>	<i>Fairfield</i>
Guy Arthur Drake, <i>A.S.4</i>	<i>Adel</i>
Ph. B. Iowa, 1905	
Hattie Drake, <i>S.</i>	<i>Leon</i>
Lambert John Drees, <i>D.2</i>	<i>Carroll</i>
Louis Miller Dress, <i>A.S.2</i>	<i>Iowa City</i>
Ray Duerr, <i>A.S.1</i>	<i>McGregor</i>
Cleveland Reuben Duncan, <i>M.2</i>	<i>Iowa City</i>
B. S. Iowa, 1906	
Harley Dale Duncan, <i>D.3</i>	<i>Tipton</i>
William Homer Duncan, <i>L.A.3</i>	<i>Iowa City</i>
Harry Albert Dungelberg, <i>M.1</i>	<i>Waterloo</i>
Ethel Lucy Dunham, <i>H.M.N.3</i>	<i>Almora</i>
Frank Clark Dunham, <i>L.A.3</i>	<i>Estherville</i>
Mabel Gertrude Dunham, <i>L.A.u.</i>	<i>Clinton</i>
Marcia Orintha Dunham, <i>L.A.u.</i>	<i>Troy, N. Y.</i>
Elmer W. Dunkelberg, <i>M.1</i>	<i>Waterloo</i>
Harry Albert Dunkelberg, <i>M.1</i>	<i>Waterloo</i>

Ralph Alan Dunkelberg, *L.1;L.A.u.*

George Albert Dunn, *P.1*

Jay Dee Dunshee, *M.4*

Cora Durbin, *L.A.3*

Florence Durbin, *L.A.4*

James Howland Dutton, *S.*

Maytilda A. Duus, *S.*

Joseph M. Dvorak, *H.M.1*

Lillian Frances Dvorsky, *L.A.3*

George Eugene Easton, *L.A.4*

Guy Wells Eaton, *L.A.2*

Ralph Rolan Eaton, *P.1*

Fannie Eberhardt, *S.*

Edwin Christian Ebersole, *S.*

B. A. Iowa, 1906

Alice Mavor Edwards, *L.A.4*

Evie James Edwards, *A.S.4*

Leroy Ellis Edwards, *A.S.1*

William C. Edwards, *L.3*

Harry Leroy Eells, *L.A. P.R.;S.*

Peter Adolphus Ernisse, *D.1*

Charles Raymond Eichhorn, *L.A.4*

Glenn Leroy Eichhorn, *L.1*

Thomas Longley Eland, *M.4*

Edward Gregory Elliott, *L.2*

Leroy Patton Elliott, *L.A.3*

Maud Ellen Elliott, *L.A.1;S*

Oliver Morton Elliott, *G.;S.*

B. A. Marietta College, 1890

Chester B. Ellyson, *A.S.s.*

Hilda Votaw Ellyson, *L.A.s.*

Mae Elson, *L.A.2*

Lee W. Elwood, *L.1*

Clarence Le Roy Ely, *L.2*

Olin Joseph Emmons, *A.S.4*

Henry Leopold von Ende, *A.S.u.*

Arthur Sigler Engbretson, *L.1*

Andrew Engelmann, *D.2*

Mabelle Louise English, *L.A.1*

Ada Eva Enright, *L.A.2*

Waterloo

Eldon

Moulton

Malvern

Malvern

Albia

Graettinger

Elberon

Iowa City

Strawberry Point

Waukon

Ladora

Knoxville

Iowa City

Waterloo

Williamsburg

Onawa

Epworth

New Hartford

Iowa City

Atlantic

Malcom

Mediapolis

Epworth

Iowa City

Iowa City

Sheldon

West Branch

West Branch

Lineville

Elma

Maquoketa

Iowa City

Burlington

Hampton

Kesley

Council Bluffs

Menlo

Frank L. Enright, <i>A.S.s.</i>	Garwin
Forest Chester Ensign, <i>G.;S.</i>	Council Bluffs
M. Di. Iowa State Normal, 1895; B. Ph., 1897; M. A., 1900	
Bruce Ensley, <i>M.4</i>	Iowa City
B. S. Penn College, 1908	
Carl Clifford Epperson, <i>M.1</i>	Vinton
Erik Joseph Eriksson, <i>A.S.1</i>	Odebolt
Florence M. Espy, <i>L.T.S.</i>	Fort Madison
John Wesley Evans, <i>L.3</i>	Decatur, Ill.
Thomas E. Evans, <i>A.S.2</i>	Marion
Edgar McCoy Everhart, <i>S.</i>	Sioux City
B. Ph. Morningside College, 1906	
Gustav Adolph Everson, <i>M.1</i>	Rolfe
Earl V. Eves, <i>A.S.1</i>	West Liberty
Lou Grace Ewers, <i>L.A.4</i>	Albia
Mary Lord Fairbanks, <i>S.</i>	Iowa City
Louise Henrietta Falk, <i>L.A.2;S.;Mus.</i>	Davenport
Marshall Jay Fancher, <i>M.1</i>	Earlham
Homer Enoch Fankhauser, <i>D.2</i>	Sigourney
Frank Wilkinson Farnsworth, <i>D.3</i>	Sanborn
Eva Crane Farnum, <i>L.A. P.R.;S.</i>	Mason City
Arthur J. Fawcett, <i>H.M.2</i>	Iowa City
Wylie Webb Fay, <i>L.3</i>	Nevada
B. Ph. Iowa, 1905	
William Willard Folkner, <i>A.S.2</i>	Iowa City
Ora Mabel Fellows, <i>G.</i>	Iowa City
B. S. Upper Iowa, 1899	
Garnett Smith Felt, <i>H.M.4</i>	Hart, Mich.
Frank N. Fencel, <i>S.</i>	Cedar Rapids
Lloyd McBride Ferguson, <i>P.1</i>	Hot Springs, S. D.
Maud Luella Ferguson, <i>L.A.2</i>	Ida Grove
Ruby Page Ferguson, <i>L.A.1</i>	Sioux City
Emery Nelson Ferriss, <i>G.P.R.</i>	Toledo
B. Ph. Western College, 1904; M. A., 1905	
Arthur Davison Ficke, <i>L.2</i>	Davenport
B. A. Harvard, 1904	
Agnes Jeannette Field, <i>L.A.4;S.</i>	Humboldt
Herbert Oscar Field, <i>L.A.2</i>	Des Moines
Ned McLean Field, <i>L.A.u.</i>	Lake City
Mary Alice Fieseler, <i>L.A.u.</i>	Iowa City
Robert Miles Figg, <i>D.1</i>	Iowa City

Arthur Theodore Fillenwarth, <i>L.A.2</i>	<i>Britt</i>
Ralph Everrette Finnicum, <i>L.A.1</i>	<i>Des Moines</i>
Albert Friederich Fischer, <i>A.S.1</i>	<i>Iowa City</i>
Edith Mabel Fischer, <i>L.A.3; Mus.</i>	<i>Castana</i>
M. Di. Iowa State Normal, 1906	
Jesse J. Fishburn, <i>P.1; L.A.u.</i>	<i>Muscatine</i>
Elbert Earnest Fisher, <i>M.u.</i>	<i>Rodney</i>
M. Di. University of the Northwest, 1898	
Elmer George Fisher, <i>L.A.2</i>	<i>Underwood</i>
Edward Clarence Fitzgerald, <i>L.2</i>	<i>Rock Rapids</i>
B. A. Iowa, 1906	
Gladys Mae Fitzgerald, <i>M.N.1</i>	<i>Ainsworth</i>
Matthew Joseph Fitzpatrick, <i>M.2</i>	<i>Elkader</i>
Reed Adams Flickinger, <i>L.A.1</i>	<i>Council Bluffs</i>
Fred Morrow Fling, (Mrs.), <i>S.</i>	<i>Lincoln, Neb.</i>
B. L. Minnesota, 1893; M. A. Nebraska, 1898	
Frank Howard Folkins, <i>H.M.2</i>	<i>Cedar Rapids</i>
Earl H. Ford, <i>D.1</i>	<i>Bayard</i>
Frank E. Ford, <i>S.</i>	<i>Bates City, Mo.</i>
M. Di. Iowa State Normal, 1905	
Mabel Elizabeth Fordyce, <i>L.A.u.</i>	<i>Oelwein</i>
Wilbert Evans Fordyce, <i>S.</i>	<i>Oelwein</i>
George Leroy Forrey, <i>A.S.2</i>	<i>Marshalltown</i>
Burrell Clarence Foster, <i>L.A.s.</i>	<i>Wellman</i>
Jesse Walter Foster, <i>H.M.1</i>	<i>Arlington</i>
Mabel Marcella Foster, <i>G.</i>	<i>Iowa City</i>
B. Ph. Iowa, 1899	
Charles Karel Bretslav Fousek, <i>L.A.3</i>	<i>Vega, S. D.</i>
Arthur Vincent Fowler, <i>L.A.s.</i>	<i>Waterloo</i>
Katherine L. Fowler, <i>L.A.1</i>	<i>Des Moines</i>
Walter Henry Fox, <i>S.</i>	<i>West Union</i>
M. D. Iowa, 1905	
George Cutler Fracker, <i>G.</i>	<i>Cedar Rapids</i>
B. Ph. Iowa, 1894; A. M., 1900	
Luis Francisco, <i>A.S.2; S.</i>	<i>Batangas, P. I.</i>
Grace F. Franke, <i>M.N.1</i>	<i>Allison</i>
Ellen Franklin, <i>M.N.1</i>	<i>Nebo, Ill.</i>
Maude Fratzke, <i>H.M.N.2</i>	<i>Jesup</i>
George Enfield Frazer, <i>L.A.2</i>	<i>Anamosa</i>
Herbert Lyman Thomas Frazier, <i>L.1</i>	<i>Lost Nation</i>
Max C. Frazier, <i>D.2</i>	<i>Nevada</i>

Sebena Schoonover Frazier, <i>L.A.4</i>	<i>Nevada</i>
David Barnard Freeman, <i>M.1</i>	<i>Moline, Ill.</i>
Mae Agnes Freeman, <i>G.</i>	<i>Iowa City</i>
B. Ph. Iowa, 1898; M. A., 1898	
Grover Cleveland Freese, <i>L.A.2</i>	<i>Adair</i>
Raymond Albert French, <i>L.A.4</i>	<i>Glenwood</i>
Royal F. French, <i>M.2</i>	<i>Humboldt</i>
B. S. Iowa, 1906	
Orie Friedline, <i>L.A.3</i>	<i>Ida Grove</i>
Harvey Frink, <i>L.A.1</i>	<i>Shenandoah</i>
Carl C. Fritz, <i>L.2</i>	<i>Conrad</i>
B. S. Iowa, 1906	
Oscar A. Fritz, <i>D.1</i>	<i>Grundy Center</i>
Charles Phineas Frost, <i>L.2</i>	<i>Washta</i>
Mary Alice Frum, <i>L.A.2</i>	<i>Shelby</i>
Albert Clark Fuller, Jr. <i>S.</i>	<i>Storm Lake</i>
M. Di. Iowa State Normal, 1899	
Florence Catherine Fuller, <i>M.2</i>	<i>Rolfe</i>
Francis Marion Fuller, <i>L.A.1</i>	<i>Mt. Ayr</i>
Mary Alice Fullerton, <i>S.</i>	<i>Osage</i>
Ralph William Fullerton, <i>D.2</i>	<i>Webster City</i>
Robert Fullerton, Jr., <i>L.A.4</i>	<i>Des Moines</i>
Ruth Augusta Gallaher, <i>S.</i>	<i>Arlington</i>
George Galloway, <i>S.</i>	<i>Dunlap</i>
M. Di. Iowa State Normal, 1901	
Raymond Garber, <i>L.A.1</i>	<i>Adair</i>
Nellie Elizabeth Gardner, <i>L.A.2; Mus.</i>	<i>New Hampton</i>
Olive Elizabeth Gardner, <i>L.A.2</i>	<i>Audubon</i>
Roy Lawrence Gardner, <i>S.</i>	<i>Dudley</i>
Irma Edna Garlock, <i>L.A.2</i>	<i>Fort Dodge</i>
Lona Elizabeth Garmong, <i>M.u.; P.u.; L.A.u.; S.</i>	<i>Des Moines</i>
Mark Rowe Garth, <i>D.u.</i>	<i>Clarion</i>
Catherine Teresa Garvin, <i>L.A.u.</i>	<i>Ottumwa</i>
Thomas Martin Garvin, <i>M.4</i>	<i>Ottumwa</i>
Morse Andrew Gates, <i>D.1</i>	<i>Garden City, Minn.</i>
George Woodward Gearhart, <i>L.1; G.</i>	<i>Bataria</i>
B. A. Parsons College, 1905	
Viola Catherine Gehlen, <i>L.A.2</i>	<i>Le Mars</i>
Julian Geneva, <i>A.S.1</i>	<i>What Cheer</i>
Libbie George, <i>L.A.2</i>	<i>Monticello</i>
Wesley Birney George, <i>A.S.1</i>	<i>Marengo</i>

Edward D. Gepson, *L.A.4;G.*

B. A. Iowa, 1907

Ellen Geyer, *G.*

B. Ph. Iowa, 1902

Frank Ross Gibson, *P.2;L.A.u.*

George Henry Gibson, *L.1*

Harold Lee Giesler, *L.1*

William Franklin Gigray, *D.1*

Robert Alexander Gilmore, *L.A.2*

Wellington Avery Gilmore, *L.A.1*

Nathan Howard Gist, *D.2*

Howard Gittinger, *L.A.s.*

Anne Elizabeth Gittins, *L.A.1*

Gertrude Gittins, *L.A.4*

Robert Lincoln Glase, *M.4*

Remley John Glass, *L.A.4;L.1*

Elmer Godown, *L.A.4*

Clara Lillian Goettle, *L.A.1*

Antony Lewis Goetz, *A.S.u.*

Louise Elizabeth Goetz, *L.A.1*

Clyde Cecil Goldsbury, *D.2*

Byron Goldthwaite, *A.S.1*

Irene Gongwer, *L.A.s.*

Sidney B. Goodenow, *M.2*

Ida Venus Goodhue, *L.A.u.*

Leo Albert Goodman, *M.1*

James Edwin Goodwin, *L.3*

B. S. Iowa, 1905

E. Ferne Gordon, *L.A.s.*

Kathryn M. Gordon, *S.*

Willard Benedict Gordon, *L.A.3*

Reuben Goslin, *L.A.1*

Raymond Edward Gosnell, *L.A.1*

Helen Louise Gould, *L.A.1*

James Ellis Gow, *G.P.R.;S.*

B. Ph. Iowa, 1901; M. S., 1906

May Elizabeth Grady, *L.A.1.;S.*

Otha Owen Grady, *P.2*

George Dudley Graham, *D.3*

James Allan Graham, *D.2*

Jennie Mae Graham, *L.A.1*

Dunlap

Cedar Rapids

Artesian, S. D.

Moline, Ill.

Muscatine

Osceola

Vinton

Algona

Cedar Falls

Chariton

Williamsburg

Williamsburg

Murray, Utah

Mason City

Linden

Iowa City

Iowa City

Iowa City

Nevada

Marengo

West Branch

Battle Creek

Cedar Rapids

Rhodes

Burt

Fremont

Iowa City

Iowa City

Clarion

Fort Dodge

Atlantic

Greenfield

Iowa City

Kalona

Waterloo

Rock Island, Ill.

Wapella

May Catherine Graham, <i>L.A.u.</i>	<i>Iowa City</i>
Sada Maude Graham, <i>L.A.1</i>	<i>Burlington</i>
Earl Reuben Granner, <i>P.2</i>	<i>Hubbard</i>
Minne Belle Graves, <i>L.A.1</i>	<i>Red Oak</i>
Carl William Gray, <i>A.S.3</i>	<i>Sioux Falls, S. D.</i>
Claude Cannie Gray, <i>L.2;L.A.u.</i>	<i>Springdale</i>
Roy Gray, <i>M.2</i>	<i>Newton</i>
Wayland Roberts Gray, <i>P.2</i>	<i>Cedar Falls</i>
Allie Pearl Green, <i>M.1</i>	<i>West Union</i>
Catherine Mary Green, <i>L.A.3</i>	<i>Sioux City</i>
Elmer Simon Green, <i>L.1;L.A.u.</i>	<i>Cedar Rapids</i>
Emmett Amos Greene, <i>D.3</i>	<i>Osage</i>
Harold Stephen Greenleaf, <i>L.2</i>	<i>Fairfield</i>
B. S. Parsons College, 1905	
Orion Russell Gregg, <i>H.M.3</i>	<i>Lake City</i>
Abraham J. Greiner, <i>D.1</i>	<i>Muscatine</i>
Milf Menken Griepenburg, <i>L.A.4;L.1</i>	<i>Kingsley</i>
Herbert Karl Griffin, <i>A.S.2</i>	<i>Iowa City</i>
William Leighton Griffin, <i>M.1</i>	<i>Waterloo</i>
Grace Griffith, <i>L.A.4</i>	<i>Iowa Falls</i>
J. Edwin Griffith, <i>A.S.1</i>	<i>Iowa Falls</i>
John George Griffith, <i>S.</i>	<i>Iowa City</i>
B. S. Iowa, 1901	
Ella Mary Grissel, <i>L.A.2</i>	<i>Cedar Rapids</i>
Jeannetta Grissell, <i>L.A.3;S.</i>	<i>Iowa City</i>
Gena Bertina Groe, <i>L.A.1</i>	<i>Lake Mills</i>
Henry Raymond Gross, <i>H.M.1</i>	<i>Dubuque</i>
Oscar Grow, <i>L.3</i>	<i>Osage</i>
Lloyd Matthew Guidinger, <i>L.A.s.</i>	<i>Northwood</i>
Spencer Allen Guiles, <i>S.</i>	<i>Shellsburg</i>
George Byron Gunderson, <i>L.A.1</i>	<i>Rolfe</i>
Ross Ervin Gunn, <i>L.A.2</i>	<i>Seymour</i>
Selskar Michael Gunn, <i>M.1</i>	<i>Dublin, Ireland</i>
B. S. Boston Institute of Technology, 1905	
Walter Gutz, <i>L.A.u.</i>	<i>Pomeroy</i>
Frederike Barbara Haan, <i>S.</i>	<i>Renville, Minn.</i>
B. A. Wisconsin, 1904; M. A. Iowa, 1905	
Wylie Warren Hafer, <i>L.A.u.</i>	<i>Council Bluffs</i>
Arthur E. Hageboeck, <i>A.S.u..</i>	<i>Davenport</i>
Harry Herbert Hagendorn, <i>M.2</i>	<i>Manning</i>

George W. Hageman, D.1	<i>Iowa City</i>
B. A. Central Wesleyan College, 1899; B. A. Missouri, 1908	
Frank Nicholas Hagerman, L.A.1	<i>Toledo</i>
Laurence Ralph Hagler, A.S.s.	<i>Milton</i>
Ralph Hahm, A.S.1	<i>Orange City</i>
Charles Earl Haines, D.2	<i>Center Point</i>
Gerhardt Frederic Paul Halbfass, A.S.2	<i>La Porte City</i>
Henry Moderwell Haldeman, L.A.u.	<i>Iowa City</i>
Avis Mary Hall, L.A.2	<i>Hawarden</i>
Forest Frank Hall, M.2	<i>Webster City</i>
Harry Atchison Hall, D.2	<i>Burlington</i>
Donald Hallahan, L.1;L.A.u.	<i>Pomeroy</i>
John Roland Halvorson, L.A.4	<i>Ridgeway</i>
Benjamin Charles Hamilton, Jr., M.2	<i>Jefferson</i>
Birdie May Hamilton, L.A.1	<i>Iowa City</i>
Mary Hamilton, M.N.3	<i>Winthrop</i>
Alonzo Baby Hamm, D.1	<i>Tipton</i>
Le Roy Aaron Hammer, M.1	<i>Ottumwa</i>
Pyrdith Hammond, L.A.s.	<i>Pocahontas</i>
Laura Frances Hampson, L.A.1	<i>Iowa City</i>
William McMicken Hanchett, H.M.3	<i>Council Bluffs</i>
B. A. Harvard, 1903	
Elsie Hands, L.A.3	<i>Iowa City</i>
Ella Sophia Hanke, L.A.2	<i>Iowa City</i>
Mabel Hanley, L.A.1	<i>Iowa City</i>
Thomas Archie Hanlon, L.A.1	<i>Panora</i>
Roy Findley Hannum, L.A.4	<i>Winfield</i>
Clarence Melvin Hanson, L.A.1	<i>Badger</i>
Paul John Hanzlik, L.A.2	<i>Cedar Rapids</i>
Ph. G. Iowa, 1902	
Arthur Abraham Harden, L.A.s.	<i>Casey</i>
Emmett Sydney Harden, L.A.1	<i>Casey</i>
Harriett Minerva Harden, P.u.	<i>Casey</i>
Conried Rex Harden, M.4	<i>Woodburn</i>
Edward J. Harmeier, L.u.;L.A.u.	<i>Washington</i>
Walter Max Harned, D.2	<i>Grand Junction</i>
Edna Helen Harper, L.A.1	<i>Burlington</i>
Edna Lavina Harris, L.A.1	<i>Perry</i>
Florence Baxter Harrison, M.N.1	<i>Waterloo</i>
Nella Hart, L.A.1	<i>Iowa City</i>

Eugene C. Hartley, <i>A.S.2</i>	<i>Ida Grove</i>
George A. Hartley, <i>M.3</i>	<i>Ida Grove</i>
Fred Harvey, <i>L.A.3</i>	<i>Anamosa</i>
Herbert Macy Harwood, <i>L.A.3</i>	<i>Des Moines</i>
Harriet Louise Haskins, <i>G.P.R.;S.</i>	<i>North Adams, Mass.</i>
B. A. Vassar College, 1890	
Ralph Waldo Hasner, <i>L.A.1</i>	<i>Independence</i>
Irving Carroll Hastings, <i>L.A.u.</i>	<i>Spencer</i>
Edward J. Hatch, <i>A.S.4</i>	<i>Hamburg</i>
James Charles Hathaway, <i>D.2</i>	<i>Iowa Falls</i>
Percy Norval Haughtelin, <i>L.A.1</i>	<i>Panora</i>
Emmet L. Hawkins, <i>L.A.1</i>	<i>Council Bluffs</i>
Clara May Hayden, <i>M.4</i>	<i>Eldon</i>
B. S. Iowa, 1906	
Agnes Julia Hayes, <i>S.</i>	<i>West Liberty</i>
Fritz Felkner Haynes, <i>L.A.1</i>	<i>Centerville</i>
Hazel Hayward, <i>L.T.S.</i>	<i>Clear Lake</i>
Archie Merrill Hazard, <i>A.S.3</i>	<i>Iowa City</i>
Charles Merrill Hazard, <i>H.M.1</i>	<i>Iowa City</i>
James Peter Healy, <i>L.1;L.A.u.</i>	<i>Inwood</i>
William Healy, <i>L.1</i>	<i>Lisbon</i>
B. A. Iowa, 1906	
Mary Kathrina Heard, <i>G.</i>	<i>North East, Pa.</i>
Ph. C. Michigan, 1892; Ph. B. Iowa, 1905; M. D., 1905	
Henry Robert Heath, <i>A.S.u.</i>	<i>Fort Dodge</i>
Mabele Heckman, <i>H.M.N.2</i>	<i>Lewis</i>
Harry Henry Hector, <i>L.A.1</i>	<i>Walnut</i>
Walter Charles Heers, <i>D.1</i>	<i>Story City</i>
Lydia Barnard Heery, <i>L.A.2</i>	<i>Clarksville</i>
Agnes Ethel Heightshe, <i>L.A.P.B.;S.</i>	<i>Perry</i>
M. Di. Iowa State Normal, 1903	
Ralph Emerson Heilman, <i>S.</i>	<i>Ida Grove</i>
B. Ph. Morningside College, 1906	
Cecil Mercedes Heinsius, <i>L.A.4</i>	<i>Iowa City</i>
Fred Heiny, <i>D.1</i>	<i>Plymouth</i>
Bertha Selma Heinz, <i>L.A.1</i>	<i>Ackley</i>
William Frederick Heinz, <i>A.S.1</i>	<i>Ackley</i>
Charles Lee Heit, <i>D.3</i>	<i>Galena, Ill.</i>
Ph. G. Highland Park College, 1903	
Ralph Linton Helm, <i>L.A.1</i>	<i>Des Moines</i>
Rush Helwick, <i>D.1</i>	<i>Washington</i>

John Dexter Hemingway, <i>D.3</i>	<i>Hampton</i>
Bertha Orr Hemsworth, <i>L.A.u.</i>	<i>Cedar Falls</i>
Jesse van Fleet Henley, <i>L.A.2;S.</i>	<i>Davenport</i>
Henry Henneger, <i>L.3</i>	<i>Bellevue</i>
William Andrew Henneger, <i>M.3</i>	<i>Bellevue</i>
Edward Francis Hennessy, <i>A.S.3</i>	<i>Iowa City</i>
Felix Alphonsus Hennessy, <i>M.4</i>	<i>Strawberry Point</i>
Henry Henrickson, <i>P.Prac.1</i>	<i>Clinton</i>
Bert William Henry, <i>L.2</i>	<i>Strawberry Point</i>
Hipolito Hernando, <i>A.S.u.</i>	<i>Lavag, P. I.</i>
Charles Ernest Herrick, <i>L.A.3</i>	<i>Exira</i>
Rupert Connor Herrick, <i>M.3</i>	<i>Humboldt</i>
Harriette M. Herrman, <i>L.A.4</i>	<i>Mason City</i>
Elizabeth Akers Hershire, <i>H.M.N.2</i>	<i>Iowa City</i>
Henry John Hertz, <i>M.2</i>	<i>Iowa City</i>
Carrie Estelle Hess, <i>L.A.s.</i>	<i>Evansville, Ind.</i>
Hope Hess, <i>L.A.1;Mus.</i>	<i>Bedford</i>
Percy Shelley Hess, <i>A.S.3</i>	<i>Iowa City</i>
Belle Hetzel, <i>L.A.1</i>	<i>Avoca</i>
Fred Guest Hickenlooper, <i>L.1;L.A.u.</i>	<i>Iowa City</i>
John Clarence Higgins, <i>L.1;L.A.u.</i>	<i>Davenport</i>
Thomas Jefferson Higgins, <i>L.A.1</i>	<i>Aurora, Ill.</i>
Grace Hill, <i>L.T.S.</i>	<i>Fort Dodge</i>
B. Ph. Iowa College, 1906	
Louis L. Hill, <i>L.A.2</i>	<i>Nashua</i>
Joseph Kennicott Hilton, <i>A.S.s.</i>	<i>Forest City</i>
Catherine Agnes Himes, <i>L.A.1</i>	<i>Sioux City</i>
William Himes, <i>H.M.u.</i>	<i>Anamosa</i>
David Himmelblau, <i>L.A.2</i>	<i>Charles City</i>
Ruth Wilburta Hindman, <i>L.A.1</i>	<i>Iowa City</i>
Fred William Hinkhouse, <i>L.A.s.</i>	<i>West Liberty</i>
Jonathan Gennings Emmons Hinkle, <i>D.1</i>	<i>Pleasanton</i>
Mayme Hirsher, <i>L.A.1</i>	<i>Iowa City</i>
Augusta Eaton Hitchcock, <i>G.</i>	<i>Osage</i>
M. Di. Iowa State Normal, 1905; B. A. Lombard College, 1902	
Bess Madalene Hixson, <i>L.A.u;Mus.</i>	<i>Des Moines</i>
Friend Reed Hoar, <i>A.S.3</i>	<i>Iowa City</i>
Herbert Henry Hoar, <i>L.A.3</i>	<i>Iowa City</i>
John Thomas Hoar, <i>D.1</i>	<i>Iowa City</i>
John Roy Hoats, <i>G.</i>	<i>Cedar Falls</i>

A. B. Iowa State Normal, 1906

Agnes Jane Hobart, <i>M.4</i>	<i>Cherokee</i>
Tenney May Hobart, <i>L.A.4;S.</i>	<i>Cherokee</i>
Ida Neeb Hobson, <i>L.A.2</i>	<i>West Union</i>
Katharine Julena Hodge, <i>L.A.4</i>	<i>Maquoketa</i>
Alfrieda Margaret Hoerlein, <i>L.A.1</i>	<i>Iowa City</i>
Louis George Hoffman, <i>M.2</i>	<i>Atlantic</i>
Albert Whitacre Hogue, <i>L.2</i>	<i>West Liberty</i>
Regina Agnes Holland, <i>L.A.3</i>	<i>Iowa City</i>
Norman Emile Hollen, <i>L.A.u.</i>	<i>Middle River</i>
Milton Earl Hollister, <i>L.1</i>	<i>Anamosa</i>
John Carl Hollman, <i>L.A.2</i>	<i>Iowa City</i>
Mabel Hollway, <i>L.A.1</i>	<i>Sac City</i>
Meda May Holman, <i>L.A.2</i>	<i>Rockwell</i>
Anna Ann Holmes, <i>L.A.4;S.</i>	<i>Waterloo</i>
Frank P. Homan, <i>P.1</i>	<i>Alton</i>
Margaret Ellen Hooley, <i>L.A.3</i>	<i>Nichols</i>
Rose Leona Hooley, <i>L.A.3</i>	<i>Nichols</i>
Ethel Marie Hooper, <i>L.A.1</i>	<i>Cedar Rapids</i>
David Howell Hopkins, <i>L.A.2</i>	<i>Des Moines</i>
Lorena Hopkins, <i>L.A.3</i>	<i>Chinook, Mont.</i>
Clarence Cowles Hopkirk, <i>M.1</i>	<i>Fort Madison</i>
Guy Lewis Horton, <i>D.1</i>	<i>Ames</i>
Amanda E. Hosford, <i>L.T.S.</i>	<i>Monticello</i>
Louis Hoth, <i>A.S.3</i>	<i>Mexico City, Mex.</i>
William Joseph Hotz, <i>L.A.3</i>	<i>Iowa City</i>
Martha May Houbbold, <i>L.A.1</i>	<i>Audubon</i>
Hannah Lois Houghton, <i>S.</i>	<i>Norway</i>
Bush Houston, <i>M.3</i>	<i>Montezuma</i>
Shirley Seymour Hovey, <i>A.S.u.</i>	<i>Clear Lake</i>
Emma Florence Howe, <i>S.</i>	<i>Muscatine</i>
Carlisle George Howell, <i>L.A.2</i>	<i>Eagle Grove</i>
Elias Burton Howell, <i>M.4</i>	<i>Iowa City</i>
Enid Ella Hoyt, <i>L.A.1</i>	<i>Mason City</i>
Jeffrey Dolezal Hrbek, <i>L.A.4;S.</i>	<i>Cedar Rapids</i>
Sara Hrbek, <i>L.A.1</i>	<i>Cedar Rapids</i>
Libbie Mae Hruska, <i>L.A.2</i>	<i>Cedar Rapids</i>
Elbert Hamilton Hubbard, Jr., <i>L.A.4</i>	<i>Sioux City</i>
Thomas Jay Hubbard, <i>D.1</i>	<i>Stuart</i>
Theodore Huber, <i>D.2</i>	<i>Iowa City</i>
Elizabeth Susanne Hudson, <i>L.A.1</i>	<i>West Liberty</i>

Jessie Blanche Hudson, <i>M.u.</i> B. S., B. L. Iowa State College, 1893	<i>Hampton</i>
Fred Cline Huebner, <i>L.1;L.A.u.</i> B. S. Iowa Wesleyan, 1906	<i>Iowa City</i>
Archie B. Huff, <i>H.M.2</i>	<i>Maquoketa</i>
Emma D. Huff, <i>L.A.u.</i>	<i>Iowa City</i>
John James Huff, <i>L.A.2</i>	<i>Muscatine</i>
Albert Francis Hull, <i>L.A.s.</i>	<i>Marshalltown</i>
Claude Linvill Hunsicker, <i>D.3</i> D. D. S. Iowa, 1907	<i>Indianola</i>
Verne Carleton Hunt, <i>L.A.s.</i>	<i>La Porte City</i>
Elizabeth Ann Hunter, <i>L.A.u.</i>	<i>Iowa City</i>
Bert Roy Huntington, <i>M.4</i>	<i>Creston</i>
Horace Lee Husted, <i>M.u.</i>	<i>Muscatine</i>
Everett Ross Hutchinson, <i>S.</i> B. Ph. Iowa, 1905	<i>Allerton</i>
Mary Edith Hutchinson, <i>S.</i>	<i>Montezuma</i>
Sarah Delia Hutchinson, <i>G.</i> B. Ph. Iowa, 1883; M. A., 1888.	<i>Iowa City</i>
Nelsfuel Hvistendahl, <i>D.2</i>	<i>Vermillion, S. D.</i>
Sidney Samuel Hyter, <i>L.A.2</i>	<i>Wever</i>
George L. Indra, <i>P.1</i>	<i>Mitchell</i>
Leon Ines, <i>S.</i>	<i>Vigan Ilocos Sur, P. I.</i>
Arthur Blaine Ingham, <i>L.A.2</i>	<i>Washington</i>
Jesse Phineas Irish, <i>D.1</i>	<i>Sterling, Colo.</i>
Oliver Roscoe Irwin, <i>H.M.1</i>	<i>Irwin</i>
Ralph McClure Irwin, <i>D.2</i>	<i>Fairfield</i>
Harry Morgan Ivins, <i>M.3;G.</i> B. S. Iowa, 1904	<i>Grundy Center</i>
Charles Bernard Jackman, <i>M.1;P.2</i>	<i>Iowa City</i>
John Henry Jacobs, <i>L.A.u.</i>	<i>Davenport</i>
Sadie Jacobs, <i>G.</i> B. A. Iowa, 1906	<i>Burlington</i>
Benjamin Louis Jacobson, <i>L.A.2</i>	<i>Des Moines</i>
Leon Downie Jay, <i>M.2</i>	<i>Jefferson</i>
Arthur Jayne, <i>A.S.s.</i>	<i>Muscatine</i>
Manning Jaynes, <i>M.4</i> M. Di. Iowa State Normal, 1898	<i>Iowa City</i>
Sue Marie Jefferson, <i>L.A.u.</i>	<i>Clinton</i>
Sara Winifred Jennings, <i>S.</i> B. Ph. Des Moines College, 1904	<i>Boone</i>

Julius Christian Jensen, <i>A.S.1</i>	<i>Glenellen</i>
Walter August Jensen, <i>L.A.u.</i>	<i>Parkersburg</i>
John Jacob Jewell, <i>L.1;A.S.u.</i>	<i>Decorah</i>
Susan Grace Jewell, <i>G.</i>	<i>Grinnell</i>
<i>A. B. Tabor College, 1904</i>	
Fred Will Johansen, <i>L.A.2</i>	<i>Gladbrook</i>
Alfred Johnson, <i>H.M.2</i>	<i>Brigade</i>
<i>D. O. Still College, 1904</i>	
Elisabeth Johnson, <i>G.</i>	<i>Sioux City</i>
<i>B. Ph. Morningside College, 1906</i>	
Eric Albert Johnson, <i>A.S.s.</i>	<i>McKeesport, Pa.</i>
Henry Charles Johnson, <i>G.P.R.</i>	<i>Greene</i>
<i>B. Ph. Iowa, 1908</i>	
Joel Ernest Johnson, <i>G.P.R.;S.</i>	<i>Marathon</i>
<i>M. Di. Iowa State Normal, 1900; B. Ph. Iowa, 1904</i>	
Julian Philip Matthew Johnson, <i>H.M.1</i>	<i>Ottumwa</i>
<i>B. A., B. D. Chicago, 1899; B. L. Southwestern Baptist College, 1899; B. A., 1890; M. A., 1893</i>	
Nelle G. Johnson, <i>S.</i>	<i>Belle Plaine</i>
<i>M. Di. Iowa State Normal, 1896</i>	
Otis Leroy Johnson, <i>A.S.s.</i>	<i>Marshalltown</i>
Thomas Edward Johnson, <i>S.</i>	<i>Bode</i>
<i>B. A. Iowa, 1906</i>	
William John Johnson, <i>M.1</i>	<i>Sioux Rapids</i>
Ellen Johnston, <i>M.N.1</i>	<i>Manchester</i>
Harry Greenfield Johnston, <i>D.2</i>	<i>Estherville</i>
Mabel Harriet Johnston, <i>L.A.u.;Mus.</i>	<i>Ida Grove</i>
William Howard Johnston, <i>M.1</i>	<i>Spencer</i>
William Mervin Johnston, <i>A.S.1</i>	<i>Anamosa</i>
William Samuel Johnston, <i>L.A.3</i>	<i>Estherville</i>
Almeda Jones, <i>L.A.1</i>	<i>Iowa City</i>
Floyd Woodruff Jones, <i>A.S.1</i>	<i>Independence</i>
Irene Ruth Jones, <i>L.A.1</i>	<i>Marengo</i>
Laura M. Jones, <i>L.A.u.</i>	<i>Iowa City</i>
Laurence Clifton Jones, <i>L.A.4</i>	<i>Marshalltown</i>
Lulah Francis Jones, <i>L.A.1</i>	<i>Red Oak</i>
Margaret Jones, <i>L.A.1</i>	<i>Des Moines</i>
Meddie Maze Jones, <i>L.A.u.</i>	<i>Cherokee</i>
Nellie Jones, <i>L.A.1;S.</i>	<i>Iowa City</i>
Oran DeVere Jones, <i>A.S.1</i>	<i>Spencer</i>
Pamelia Pearl Jones, <i>G.</i>	<i>Cherokee, Kans.</i>
<i>B. A. Iowa, 1906</i>	

Robert Newton Jones, <i>L.A.u.</i>	<i>Iowa City</i>
Wata Jane Jones, <i>S.</i>	<i>Iowa City</i>
B. A. Iowa, 1906	
William Elwyn Jones, <i>L.A.3</i>	<i>Nashua</i>
John Walter Jordan, <i>L.3</i>	<i>Boone</i>
B. S. Iowa State College, 1904	
Elisa Jorgensen, <i>D.3</i>	<i>Kenosha, Wis.</i>
Florence Livingston Joy, <i>S.</i>	<i>Iowa City</i>
B. Ph. Iowa, 1902	
Catherine Gaynard Joyce, <i>L.A.2;8</i>	<i>Agency</i>
Edward Joyce, <i>M.2</i>	<i>Dunlap</i>
Michael Francis Joynt, <i>M.1</i>	<i>Emmetsburg</i>
Robert James Joynt, <i>D.3</i>	<i>Emmetsburg</i>
Fred E. Judy, <i>P.1</i>	<i>Oakland</i>
Emil Charles Junger, <i>S.</i>	<i>Solder</i>
M. D. Sioux City Medical College, 1902	
Lawrence Jens Kaasa, <i>M.1</i>	<i>Ridgeway</i>
A. B. Luther College, 1903	
Carl Kail, <i>M.3</i>	<i>Carlisle</i>
William Fred Kallaus, <i>D.2</i>	<i>Ainsworth</i>
Otto Fred Kampmeier, <i>L.A.2</i>	<i>Iowa City</i>
Carl Ebel Kasemeier, <i>A.S.1</i>	<i>Waverly</i>
Valborg Kastman, <i>G.</i>	<i>Cambridge, Mass.</i>
B. A. Iowa, 1904	
Charles Beecher Kaufmann, <i>L.A.1</i>	<i>Wilton</i>
Francis Patrick Keane, <i>L.1</i>	<i>Dunkertown</i>
Helen Marguerite Keffe, <i>L.A.1</i>	<i>Sioux City</i>
Francis Edward Keenan, <i>M.1</i>	<i>Grinnell</i>
William Henry Kehm, <i>S.</i>	<i>Fort Dodge</i>
Bessie Keil, <i>L.A.1</i>	<i>Marengo</i>
George Edgar Keller, <i>M.1</i>	<i>Elkhart</i>
Josephine Julia Keller, <i>H.M.N.2</i>	<i>Iowa City</i>
Emmet Joseph Kelley, <i>L.3</i>	<i>Fort Dodge</i>
George Martin Kellogg, Jr., <i>L.A.u.</i>	<i>Sioux City</i>
Catherine Kelly, <i>M.N.1</i>	<i>Sigourney</i>
Charles H. Kelly, <i>D.1</i>	<i>Davenport</i>
Ray Arthur Kelly, <i>M.4</i>	<i>Dell Rapids, S. D.</i>
Wayne Kelly, <i>L.2</i>	<i>Rock Rapids</i>
Earl Kelty, <i>L.A.2</i>	<i>Vinton</i>
Elda Marilla Kemp, <i>L.A.3</i>	<i>Marion</i>
M. Di. Iowa State Normal, 1906	

James Kendrick, <i>L.A.4</i>	<i>Oxford</i>
M. Di. Iowa State Normal, 1900	
Jennie Mae Kennedy, <i>L.A.3</i>	<i>Iowa Falls</i>
Lloyd Armour Kennell, <i>L.A.s.</i>	<i>Keota</i>
Maurice Allen Kent, <i>L.A.3</i>	<i>Marshalltown</i>
Dora Pauline Keppler, <i>L.A.1</i>	<i>Iowa City</i>
Sidney Conkey Kerberg, <i>L.3</i>	<i>Sanborn</i>
Edna Kern, <i>L.A.4</i>	<i>Reinbeck</i>
Edith Luana Ketchum, <i>L.A.1; Mus.</i>	<i>Riceville</i>
Mae Miranda Keyser, <i>L.A.u</i>	<i>Marengo</i>
Hovhannes Sarkis Khacherian, <i>L.A.4; M.2; S.</i>	<i>Iowa City</i>
Floyd Snelson Kidd, <i>M.u.</i>	<i>Iowa City</i>
Carl Dalton Kiger, <i>L.A.2</i>	<i>Britt</i>
Karl Morton Killen, <i>L.u.; L.A.u.</i>	<i>Iowa City</i>
John E. Kimball, <i>M.3</i>	<i>West Liberty</i>
Howard Kimble, <i>A.S.4</i>	<i>Clear Lake</i>
Rudolph Kimm, <i>L.A.1</i>	<i>Marion</i>
Albert Darius King, <i>L.A.P.R.; S.</i>	<i>Iowa City</i>
M. Di. Iowa State Normal, 1903	
Lylas Sarah King, <i>L.A.4</i>	<i>Grundy Center</i>
Mabel King, <i>H.M.N.3</i>	<i>Des Moines</i>
Ora Frances King, <i>L.A.2</i>	<i>Iowa Falls</i>
Carroll Nathan Kirk, <i>L.A.1</i>	<i>Marshalltown</i>
Flossie May Kisor, <i>L.A.1</i>	<i>Iowa City</i>
Arthur Otto Klaffenbach, <i>D.3</i>	<i>Muscatine</i>
Walter C. Klaffenbach, <i>A.S.s.</i>	<i>Muscatine</i>
Rudolph Ernst Kleinsorge, <i>M.3</i>	<i>Le Mars</i>
B. S. Iowa, 1904	
Hermenegild Klima, <i>M.2</i>	<i>Baltimore, Md.</i>
Ralph Glenn Kline, <i>L.A.1</i>	<i>La Porte City</i>
George Ray Klinefelter, <i>P.2</i>	<i>Hawarden</i>
William Henry Klose, <i>S.</i>	<i>Fayette</i>
B. A. Roanoke College, 1886; M. A., 1891; B. D., Yale, 1889; M. L. Minnesota, 1899; Ph. D. Pennsylvania College, 1893; Ph. D. Iowa, 1906	
George Wesley Kluckholm, <i>L.2</i>	<i>Le Mars</i>
Carl William Knapp, <i>G.</i>	<i>Fremont, Neb.</i>
B. A. Iowa, 1906	
John Knapp, <i>D.2</i>	<i>Finton</i>
Tacie Mary Knease, <i>L.A.2</i>	<i>Oasis</i>
Ina Helen Knerr, <i>L.A.3</i>	<i>Allerton</i>
Karl Corbett Knerr, <i>L.A.1</i>	<i>Allerton</i>

STUDENTS

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Arthur Lee Knipe, <i>L.A.1;S.</i>	<i>New Hartford</i>
George Charles Knott, <i>H.M.2</i>	<i>Iola, Ill.</i>
B. A. Coe College, 1905	
Herman Aldrich Knott, <i>D.2</i>	<i>Tipton</i>
Will Perry Knowlton, <i>L.A.2</i>	<i>Decorah</i>
Thomas Clifford Knox, <i>M.3</i>	<i>Marcus</i>
Margherita Louise Koch, <i>L.A.2;Mus.</i>	<i>Davenport</i>
George Pendleton Koebel, <i>L.A.4;G.;S.</i>	<i>West Bend</i>
B. S. Northern Illinois Normal, 1898; B. A. Iowa, 1907	
Hugo Wilhelm Koehler, <i>G.</i>	<i>Waterloo, N. Y.</i>
A. B. Syracuse, 1903	
Alfred Edmund Gustav Koenig, <i>G.P.R.</i>	<i>Vinton</i>
A. B. Saxony College, 1902	
Choyei Kondo, <i>G.</i>	<i>Bibai, Japan</i>
LL. B. Tokio College of Law, 1902; B. A. Albion College, 1906	
Edyth Marie Koontz, <i>L.A.2</i>	<i>Iowa City</i>
Mary Glee Koser, <i>L.A.2</i>	<i>Iowa City</i>
Raymond Carl Kramer, <i>A.S.4</i>	<i>Elkader</i>
Franz Ferdinand Krause, <i>S.</i>	<i>Ionia</i>
Fridolin John Otto Kraushaar, <i>M.2</i>	<i>Clinton</i>
B. A. Wartburg College, 1905	
Fred Krenz, <i>A.S.s.</i>	<i>Buffalo Center</i>
Walter William August Kresensky, <i>M.1</i>	<i>Algona</i>
Edward Edson Krider, <i>G.</i>	<i>Waterloo</i>
M. D. Iowa, 1905	
Rudolph Andrew Kuever, <i>P. Prac.2</i>	<i>Lowden</i>
Emma Bernadine Kurz, <i>L.A.4</i>	<i>Morning Sun</i>
Clarence A. Kutcher, <i>A.S.2</i>	<i>Iowa City</i>
Joseph Addison Kyle, <i>L.A.1</i>	<i>Washington</i>
William Kuyper, <i>S.</i>	<i>Orange City</i>
Peter Godfrey LaValle, <i>A.S.u.</i>	<i>New Hampton</i>
Jessie Dee Lackey, <i>L.A.1</i>	<i>Charles City</i>
Jessie Irene Laffer, <i>L.A.1</i>	<i>Sigourney</i>
James J. Lamb, <i>L.3</i>	<i>Davenport</i>
Leonard Lucius Lamb, <i>M.2</i>	<i>Atalissa</i>
Harry Furniss Lambert, <i>S.</i>	<i>Cedar Falls</i>
John Joseph Lambert, <i>M.u.;S.</i>	<i>Iowa City</i>
B. Ph. Iowa, 1899; M.S., 1901	
Elmer Lewis Lampe, <i>M.1</i>	<i>Bellevue</i>
Henry Faris Landis, <i>H.M.4</i>	<i>Iowa City</i>
D. O. Still College of Osteopathy, 1901	
Pearl May Landon, <i>L.A.4</i>	<i>New Hampton</i>

Ray Irving Landon, <i>P.1</i>	<i>Lawler</i>
James Reed Lane, <i>L.A.1</i>	<i>Davenport</i>
Ila Gertrude Langdon, <i>M.u.</i>	<i>Grundy Center</i>
Madge Langstaff, <i>L.A.1; Mus.</i>	<i>Charles City</i>
Charles Cleveland Lantry, <i>L.3</i>	<i>Algona</i>
Arthur Edwin Larimer, <i>L.A.4</i>	<i>Cedar Rapids</i>
Blanche Dorothy Larson, <i>L.A.1</i>	<i>Waterloo</i>
Louise May Latchem, <i>L.A.4; S.</i>	<i>Washington</i>
Clark Hays Lauder, <i>M.2</i>	<i>Afton</i>
B. Ph. Parsons College, 1905	
Helen Elizabeth Laurence, <i>L.T.S.</i>	<i>Cedar Rapids</i>
Lola Laurer, <i>M.2</i>	<i>Independence</i>
Harvey Edward Law, <i>L.3</i>	<i>Waterloo</i>
Arthur Elmer Lawrence, <i>A.S.2</i>	<i>Fort Madison</i>
Frank Adolph Lawrence, <i>L.A.u.</i>	<i>Britt</i>
Homer Noel Lawson, <i>L.1</i>	<i>Wesley</i>
Karl Miles Le Compte, <i>L.A.2</i>	<i>Corydon</i>
Nell Le Compte, <i>M.2</i>	<i>Corydon</i>
Albert Walter Lee, <i>A.S.4</i>	<i>Iowa City</i>
Clarence Leon Lee, <i>D.1</i>	<i>Ottumwa</i>
Herbert Wayne Lee, <i>D.3</i>	<i>Moline, Ill.</i>
Chester Raymond Leech, <i>D.3</i>	<i>Winterset</i>
Charles Young Leeper, <i>A.S.s.</i>	<i>Clarksville</i>
John St. Claire Leeper, <i>L.A.s.</i>	<i>Clarksville</i>
Leo Roy Leeper, <i>L.A.s.</i>	<i>Clarksville</i>
Isaac Wellman Leighton, <i>M.2</i>	<i>Wellman</i>
Ralph Leighton, <i>A.S.s.</i>	<i>Hull</i>
Tessie Elizabeth Leinbaugh, <i>L.A.1; Mus.</i>	<i>Iowa City</i>
Arthur Thomas Leipold, <i>M.4</i>	<i>Moline, Ill.</i>
George Guyford Leith, <i>M.3</i>	<i>Wilton Junction</i>
Ralph Rex Lent, <i>M.1</i>	<i>Correctionville</i>
Bertram Bryant Leonard, <i>M.3</i>	<i>Holstein</i>
Elma Francis Leonard, <i>L.A.1</i>	<i>Springdale</i>
Julia Maude Leonard, <i>L.A.1</i>	<i>Springdale</i>
Emma Frances Lester, <i>L.A.1</i>	<i>South English</i>
Mary Helen Letts, <i>L.A.3</i>	<i>Columbus Junction</i>
B. A. Christian College, 1905	
Alvin Le Van, <i>A.S.4</i>	<i>Guthrie Center</i>
Anne Elizabeth Level, <i>L.A.1</i>	<i>Odebolt</i>
Charles Thomas Lewarne, <i>L.A.s.</i>	<i>Pomeroy</i>

Nellie Arlene Lewis, <i>L.A.1</i>	<i>Iowa City</i>
William A. Lewis, <i>D.2</i>	<i>Corning</i>
Anna Julia Libson, <i>L.A.1</i>	<i>Des Moines</i>
Arvid Harold Lideen, <i>L.A.1</i>	<i>Burlington</i>
Theresa Lloyd, <i>L.A.1</i>	<i>Mediapolis</i>
Adelbert Lockard, <i>D.3</i>	<i>Boone</i>
James Rolla Locke, <i>L.2;L.A.u.</i>	<i>Rockport, Mo.</i>
Clement Leslie Loehr, <i>L.A.2</i>	<i>Lone Tree</i>
Lawrence D. Lonegran, <i>L.A.u.</i>	<i>Williamsburg</i>
James Stephen Loney, <i>M.1</i>	<i>Iowa City</i>
Edna Grace Long, <i>L.A.2; Mus.</i>	<i>Tiffin</i>
Mary Regina Long, <i>L.A.2</i>	<i>Indianola</i>
Robert Elmer Long, <i>L.A.3</i>	<i>Brooklyn</i>
Charles Franklin Longerbeam, <i>A.S.s.</i>	<i>Downey</i>
Oscar Dolsen Longstreth, <i>S.</i>	<i>Washington</i>
<i>M. Di. Iowa State Normal, 1898; B. S. Iowa, 1904; M. A., 1906</i>	
Jay William Lorenz, <i>L.A.1</i>	<i>Rockford</i>
Lynne Luzerne Lorenz, <i>L.A.1</i>	<i>Rockford</i>
Ernest B. Lorenzen, <i>A.S.3</i>	<i>Clinton</i>
Lorenz Lorenzen, <i>L.A.4;L.1</i>	<i>Denison</i>
Catharine Eldred Lovell, <i>L.A.2; Mus.</i>	<i>Monticello</i>
Stella Elizabeth Gilmour Lowman, <i>G.</i>	<i>Iowa City</i>
<i>B. Ph. Iowa, 1902</i>	
Charles Elmo Luce, <i>L.A.4</i>	<i>Nashua</i>
Ella Marie Lund, <i>S.</i>	<i>Cedar Falls</i>
<i>M. Di. Iowa State Normal, 1901</i>	
John L. Lundby, <i>M.1;L.A.u.</i>	<i>Harlan</i>
Emil Leonard Lundgren, <i>G.</i>	<i>Iowa City</i>
<i>B. S. in C. E. Armour Institute of Technology, 1904</i>	
Alvord John Lundquist, <i>A.S.s.</i>	<i>Olds</i>
Erwin Glenn Lundy, <i>D.2</i>	<i>Bayard</i>
Clara Etta Luse, <i>L.A.u.</i>	<i>Ross</i>
Eva May Luse, <i>G.P.R.;S.</i>	<i>Ross</i>
<i>M. Di. Iowa State Normal, 1904</i>	
Margaret Adele Luse, <i>L.A.1</i>	<i>Iowa City</i>
George Alfred Luxford, <i>L.A.u.</i>	<i>Harlan</i>
Florence Josephine Lynch, <i>L.A.3</i>	<i>Sioux City</i>
John Irvin Lynch, <i>L.A.4;S.</i>	<i>Iowa City</i>
Laura Candace Lynch, <i>L.A.2</i>	<i>Des Moines</i>
John Elliott Lynn, <i>A.S.2</i>	<i>Lockridge</i>

Bessie Louise Lyon, <i>L.A.u.</i>	<i>Webster City</i>
David Ernest Lyon, <i>D.2</i>	<i>Jefferson</i>
Elsie Ganson Lyon, <i>L.A.2</i>	<i>Iowa City</i>
Myra Lyon, <i>L.A.3</i>	<i>Iowa City</i>
Caroline Drake Mabry, <i>L.A.4;Mus.</i>	<i>Albia</i>
B. S. Christian College, 1904	
Jessie Anderson MacArthur, <i>L.A.1</i>	<i>Burt</i>
Ethel A. MacKnight, <i>L.A.1;Mus.</i>	<i>Iowa City</i>
Marjorie Nash MacVicar, <i>L.A.1</i>	<i>Des Moines</i>
James Fred McBride, <i>M.2</i>	<i>Sterling, Ill.</i>
John Harvey McCall, <i>H.M.3</i>	<i>Washington</i>
Charles Raymond McCann, <i>A.S.4</i>	<i>Springdale</i>
Jennie Lavenia McCauley, <i>L.A.2;S.</i>	<i>Paullina</i>
William Bernard McCauley, <i>M.1</i>	<i>Rockwell</i>
Earnest Otis McCleary, <i>H.M.2</i>	<i>Mitchellville</i>
Ben Harrison McCleery, <i>L.A.s.</i>	<i>Cherokee</i>
Maud McClintock, <i>L.A.s.;S.</i>	<i>DeSoto</i>
Elizabeth June McClurkin, <i>L.A.1;Mus.</i>	<i>Morning Sun</i>
Robert Walker McCollister, <i>A.S.1</i>	<i>Iowa City</i>
Martha Irene McConlogue, <i>L. A.u.</i>	<i>Mason City</i>
Margaret Colette McCormick, <i>L.A.u.;S.</i>	<i>Churdan</i>
Anson Floyd McCreary, <i>D.2</i>	<i>Albia</i>
Maude Annetta McCreedy, <i>L.A.s.;Mus.</i>	<i>Washington</i>
Carrie Henrietta McCrory, <i>L.A.u.</i>	<i>Hawarden</i>
Jessie Edith McCulloch, <i>M.N.1</i>	<i>Brooklyn</i>
William James McCulloch, <i>A.S.s.</i>	<i>Nashua</i>
Lily McCune, <i>S.</i>	<i>Kirkville</i>
B. S. Penn College, 1898; M. S., 1901	
David James McDonald, <i>G.;S.</i>	<i>Ohio, Ill.</i>
B. A. Western College, 1905; M. A. Iowa, 1906	
Lillian McDonald, <i>S.</i>	<i>Mt. Pleasant</i>
B. Ph. Black Hills College, 1894; B. A. Boston, 1898	
Carr E. McDowell, <i>D.3</i>	<i>Iowa Falls</i>
Earl McDowell, <i>L.G.</i>	<i>Ames</i>
LL. B. Iowa, 1906	
Annie Mary McEachran, <i>L.A.4</i>	<i>Williamsburg</i>
Chester Arthur McElderry, <i>D.3</i>	<i>Fairfield</i>
Donald McElderry, <i>M.3</i>	<i>Fairfield</i>
William Donald McEwen, Jr. <i>L.1</i>	<i>Rolfe</i>
William J. McFadden, <i>L.2</i>	<i>Atlantic</i>
Francis Thomas McGill, <i>L.A.1</i>	<i>Rock Valley</i>

James Albert McGinn, S.	<i>Panama</i>
John Calhoun McGlade, S.	<i>Brighton</i>
B. Ph. Parsons College, 1904	
Mollie Palmer McGowan, L.A.4	<i>Clear Lake</i>
Leo Ross McGreevy, D.2	<i>Leland</i>
Harry J. McGregor, M.1	<i>Davenport</i>
Arthur Lowell McGuire, L.A.1	<i>Laredo, Mo.</i>
Roy Alvin McGuire, M.3	<i>Merrimac</i>
William James McGuire, D.1	<i>Watkins</i>
Charles Parnell McHugh, M.3	<i>Sioux City</i>
Lachlan Arthur McIntosh, L.A.3	<i>Rochester</i>
William George McKay, M.1;G.	<i>Ames</i>
B. S. Iowa State College, 1898; M. S., 1906	
William James McKenna, M.1	<i>Ottawa</i>
B. S. Knox College, 1902	
Ady Roy McKeown, L.A.s.	<i>Letts</i>
Albert Gay McKeown, L.A.u.	<i>Letts</i>
Charles James McLaughlin, L.A.s.	<i>Williams</i>
John William McLaughlin, L.A.s.	<i>Williams</i>
Earl Angus McLeod, D.3	<i>Central City</i>
Clifford Harry McMahan, L.A.3	<i>State Center</i>
Edward William McManus, L.1	<i>Keokuk</i>
Joseph Peter McManus, M.1	<i>Adair</i>
Kenneth McMartin, D.3	<i>Des Moines</i>
J. R. McMullin (Mrs.), L.T.S.	<i>Stuart</i>
Ray McMurray, A.S.3	<i>Newton</i>
William Berlin McMurray, Jr., L.3	<i>Savannah, Ga.</i>
Ella Beatrice McNeely, L.A.3;Mus.	<i>Burlington</i>
Frank Dent McQuilkin, L.1	<i>Iowa City</i>
Abigail Loretta McRaith, L.A.3;S.	<i>Iowa City</i>
Philip Douglas Macbride, L.A.3	<i>Iowa City</i>
Delta Marie Macdonell, L.A.s.	<i>Ottumwa</i>
Marshall Edward Macdonell, L.A.u.	<i>Ottumwa</i>
Alice F. Madden, L.A.u.	<i>Iowa City</i>
Lester Davis Madole, A.S.1	<i>Yankton, S. D.</i>
Frank C. Maher, L.3	<i>Fort Dodge</i>
Herman Charles Maine, G.	<i>Algona</i>
B. A. Iowa, 1905	
Theodore John Malmgren, M.4;P.u.;S.	<i>Akron</i>
B. A. South Dakota, 1903	
John Wilfred Maloney, A.S.1	<i>Denison</i>

Charles Albert Manahan, <i>H.M.3</i>	<i>Center Point</i>
Hazel Dell Manatrey, <i>L.A.2;Mus.</i>	<i>Fairfield</i>
Jessie Fye Manatrey, <i>G.;Mus.</i>	<i>Fairfield</i>
B. A. Parsons College, 1905	
Harry H. Mann, <i>M.3</i>	<i>Maquoketa</i>
Alice Emmons Manney, <i>L.A.2</i>	<i>Marshalltown</i>
Franklin Manz, <i>A.S.1</i>	<i>Lyons</i>
Charles William Maplethorpe, <i>M.1</i>	<i>Wellman</i>
Bert Thomas March, <i>A.S.s.</i>	<i>Ocheyedan</i>
Guy Elliott Marcy, <i>M.3</i>	<i>Montesano, Wash.</i>
Ph. G. Vashon College, 1904	
Edward William Bartholomew Mark, <i>G.;S.</i>	<i>Le Claire</i>
M. Di. Iowa State Normal, 1900; B. S. Iowa, 1905	
Mary Elsie Mark, <i>L.A.1</i>	<i>Osage</i>
James Asa Marmon, <i>G.</i>	<i>Mitchellville</i>
B. A. Simpson College, 1903	
Louis Charles Marolf, <i>L.A.3</i>	<i>Wilton Junction</i>
Ruth Maria Marsh, <i>G.</i>	<i>Charles City</i>
M. Di. Iowa State Normal, 1901; B. A. Iowa, 1906	
Florence Rose Marshall, <i>S.</i>	<i>Cresco</i>
B. A. Iowa, 1906	
Gladys Ethel Marshall, <i>L.A.1</i>	<i>Davenport</i>
Margaret Marshall, <i>L.A.1;Mus.</i>	<i>Des Moines</i>
Margaret Iowa Marshall, <i>L.A.1</i>	<i>Iowa City</i>
Alfred Henry Martin, <i>P.2</i>	<i>Iowa City</i>
Elizabeth Martin, <i>L.A.1</i>	<i>Davenport</i>
George Henry Martin, <i>M.4</i>	<i>Iowa City</i>
B. S. Iowa, 1906	
James William Martin, <i>L.1</i>	<i>Fort Dodge</i>
James Wilson Martin, <i>D.2</i>	<i>Abilene, Kans.</i>
Orlando Elmer Martin, <i>D.2</i>	<i>Aberdeen, S. D.</i>
Worley George Martin, <i>M.2</i>	<i>Dana</i>
B. A. Iowa, 1900	
Katharine Eleonore Marz, <i>L.A.2;S.</i>	<i>Homestead</i>
Edith Mason, <i>S.</i>	<i>Delavan, Ill.</i>
Laura Mason, <i>S.</i>	<i>Delavan, Ill.</i>
Hervey Fulton Masson, <i>H.M.3</i>	<i>Washington</i>
Mary Masson, <i>L.A.2</i>	<i>Washington</i>
William John Masson, <i>L.A.2</i>	<i>Washington</i>
Bernard William Mast, <i>M.1</i>	<i>Tomah, Wis.</i>
Roy Vinton Mater, <i>M.1</i>	<i>Coalfield</i>
Edith Louise Mather, <i>L.A.u.</i>	<i>West Branch</i>

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Lydia Jeannette Mather, <i>L.A.2;S.</i>	<i>Springdale</i>
Kjirstine Aneta Mathiesen, <i>L.A.3;S.</i>	<i>Harlan</i>
Walter Alfred Mathey, <i>M.2</i>	<i>Davenport</i>
George Albert May, <i>L.A.2</i>	<i>Russell</i>
Florence Mayer, <i>L.A.1</i>	<i>Iowa City</i>
Laurance Mayer, <i>L.A.1</i>	<i>Iowa City</i>
Mignon J. Maynard, <i>L.A.4</i>	<i>Council Bluffs</i>
Chester Lawrence Meade, <i>D.2</i>	<i>Liscomb</i>
James Albert Meade, <i>G.;S</i>	<i>Iowa City</i>
B. S. Iowa College, 1900	
Leonard Fletcher Meade, <i>G.;S.</i>	<i>Iowa City</i>
B. S. Iowa College, 1903	
Lucy Winifred Brant Meade, <i>G.</i>	<i>Iowa City</i>
B. Ph. Iowa, 1906	
Marion Meadow, <i>D.2</i>	<i>New York City</i>
John Francis Meany, <i>M.1</i>	<i>Waterloo</i>
Diedrich Janssen Meents, <i>M.4</i>	<i>Chicago, Ill.</i>
Rachel Remi M. Megee, <i>L.A.s.</i>	<i>Davenport</i>
Mary Bertha Mekota, <i>M.1</i>	<i>Iowa City</i>
S. J. Melson, <i>A.S.1</i>	<i>Rolfe</i>
Carrie Pearle Mercer, <i>L.A.4</i>	<i>Iowa City</i>
Carl James Mericle, <i>H.M.2</i>	<i>Garwin</i>
John Franklin Mericle, <i>G.</i>	<i>Toledo</i>
A. B. Western College, 1905	
Dayton Eugene Merrill, <i>L.A.4</i>	<i>Bear Grove</i>
Vida Helen Merrill, <i>S.</i>	<i>Mediapolis</i>
George Albert Mertz, <i>P.1</i>	<i>Rock Island, Ill.</i>
Agnes Metcalf, <i>M.3</i>	<i>Cedar Rapids</i>
Jacob William Meyer, <i>G.P.R.;S.</i>	<i>Orange City</i>
B. Ph. Iowa, 1904	
Harry Christoffer Meyers, <i>D.1</i>	<i>Carroll</i>
John Frederick Meyers, <i>A.S.4</i>	<i>Ida Grove</i>
Mary Magdalene Michels, <i>L.A.2</i>	<i>Ida Grove</i>
Elizabeth Angeline Mickelson, <i>L.A.3</i>	<i>Webster City</i>
William Drummond Middleton, <i>M.1</i>	<i>Davenport</i>
B. S. Iowa, 1906	
Winfred Mighell, <i>M.3;S.</i>	<i>Washta</i>
George Wilson Miles, <i>A.S.1</i>	<i>Forest City</i>
Mabel Miles, <i>L.A.4</i>	<i>Lineville</i>
Claribel Miller, <i>S.</i>	<i>Stacey, Mont.</i>
Claude Melvin Miller, <i>L.A. P.R.</i>	<i>Iowa City</i>
LL. B. Iowa, 1906	

Enos D. Miller, <i>M.1;S.</i>	<i>Wellman</i>
George Edward Miller, <i>L.A.1;S.</i>	<i>Stacey, Mont.</i>
Glen Ward Miller, <i>D.3</i>	<i>Whitten</i>
Grace E. Miller, <i>L.A.4</i>	<i>Muscatine</i>
Grover Cleveland Miller, <i>D.2</i>	<i>East Elkport</i>
Habel Elmer Miller, <i>A.S.s.</i>	<i>Dayton</i>
Harry Garfield Miller, <i>A.S.1</i>	<i>Creston</i>
Harry Wesley Miller, <i>L.A.u.</i>	<i>Cedar Rapids</i>
Herman Frank Miller, <i>A.S.u.</i>	<i>Creston</i>
Ida May Miller, <i>M.N.2</i>	<i>Cedar Falls</i>
Ina Vera Miller, <i>L.A.1</i>	<i>Stanwood</i>
Julia Howe Miller, <i>S.</i>	<i>Millersburg, Ky.</i>
B. A. Millersburg Female College, 1898	
Le Roy F. Miller, <i>A.S.2</i>	<i>Oxford</i>
Lillian Marie Miller, <i>L.A.2</i>	<i>Denison</i>
Margaret Jane Miller, <i>G.</i>	<i>Iowa City</i>
B. A. Iowa, 1906	
Mary Elizabeth Miller, <i>L.A. P.E.;S.</i>	<i>..Stacey, Mont.</i>
Mary Jayne Miller, <i>L.A.3</i>	<i>Iowa City</i>
Otto William Miller, <i>L.A.1</i>	<i>Atlantic</i>
Robert Edmund Miller, <i>D.2</i>	<i>Sioux City</i>
Robert James Miller, <i>L.A.u.</i>	<i>Ireton</i>
Ross Elmo Miller, <i>L.1;L.A.u.</i>	<i>Nira</i>
Clarence Reid Mills, <i>L.A.u.</i>	<i>New York City</i>
Robert Sidney Milner, <i>L.A.4</i>	<i>Belle Plaine</i>
Florence Mary Mingus, <i>G.</i>	<i>Iowa City</i>
B. A. Iowa, 1906	
George Arthur Minnich, <i>L.A.1;Mus.</i>	<i>Coon Rapids</i>
Gertrude Minthorn, <i>M.1</i>	<i>Newport, Ore.</i>
B. A. Pacific College, 1904	
Mary Agnes Minthorn, <i>L.A.4</i>	<i>Newport, Ore.</i>
B. A. Pacific College, 1906	
Walter Frank Missman, <i>M.3</i>	<i>Britt</i>
Harold Earl Mitchell, <i>D.2</i>	<i>Lancaster, Mo.</i>
Lafayette Douglas Mitchell, <i>L.2.;L.A.u.</i>	<i>Lyons</i>
B. S. Northern Illinois College, 1905	
Lilla Edythe Mitchell, <i>M.N.1</i>	<i>Ladora</i>
Walter Mitchell, <i>L.A.4</i>	<i>Iowa City</i>
M. Di. Iowa State Normal, 1901	
George Edward Mocha, <i>A.S.2</i>	<i>Iowa City</i>
George Wilber Moffitt, <i>L.A.s.</i>	<i>Fonda</i>

Lura May Moling, S.	<i>Iowa City</i>
B. Ph. Iowa, 1905	
Clarence Linnea Mollenhoff, L.A.s.	<i>Stanton</i>
William Irving Molsberry, D.2	<i>Manley</i>
Marino M. Mondoneda, L.A.u.	<i>Gamu, P. I.</i>
Althea Montgomery, L.A.u.	<i>Washington</i>
Dora B. Montgomery, L.A.2;S.	<i>Washington</i>
Arnold Robert Moon, L.A.3;M.1	<i>Williamsburg</i>
Chauncey Alson Moon, A.S.2	<i>Iowa City</i>
Herbert Lovelace Moon, L.A.4	<i>Iowa City</i>
Alice Edith Moore, L.A.4	<i>Le Mars</i>
Marguerite Moore, L.A.3	<i>Traer</i>
Newton Grant Moore, P.1	<i>Hot Springs, S. D.</i>
Edward L. Moravec, D.3	<i>Cedar Rapids</i>
William Francis Moravek, D.u.	<i>Davenport</i>
Carrie Ella Mordoff, S.	<i>Iowa City</i>
B. Ph. Iowa, 1884; A. M., 1887	
Elvira Maude Morford, L.A.2	<i>Iowa City</i>
Charles Henry Morgan, A.S.3	<i>Iowa City</i>
Foster Clair Morgan, S.	<i>Leon</i>
Francis Joseph Morgan, L.2;L.A.u.	<i>Carroll</i>
William John Morgan, G.	<i>Sibley</i>
B. S. Morningside College, 1905	
A. Jay Morris, L.A.1	<i>Jefferson</i>
Robert Ernest Morris, L.A.3	<i>Brighton</i>
George Fisher Morrison, L.A.4	<i>Fairfield</i>
Martha Mildred Morrison, Mus.	<i>Iowa City</i>
Orry Charles Morrison, M.1;S.	<i>Iowa City</i>
Laurence Michael Morrissey, L.2	<i>Ottumwa</i>
Clinton Reynolds Morse, L.A.1	<i>Iowa City</i>
Josie Myrrl Morse, L.A.1	<i>Iowa City</i>
Albert Morsman, M.S.;D.u.	<i>Iowa City</i>
Maizie Mortland, L.A.3;S.	<i>Montezuma</i>
Ruth Mortland, S.	<i>Montezuma</i>
Alexander Morton, D.u.	<i>Laurens</i>
George Mosby, H.M.4	<i>Postville</i>
John Moses, L.A.2	<i>Decorah</i>
Maggie Mae Moses, L.A.1	<i>Sanborn</i>
Olaf Storla Moses, L.A.u.	<i>Decorah</i>
Verna Moulton, L.A.1	<i>Maquoketa</i>

William Edwin Moxley, <i>D.1</i>	<i>Ames</i>
Ralpa Moyer, <i>H.M.N.3</i>	<i>Garwin</i>
Dede Ella Mudgett, <i>D.1</i>	<i>Mason City</i>
Alice Floyd Mueller, <i>L.A.2; Mus.</i>	<i>Davenport</i>
Louis Francis Mueller, <i>G.</i>	<i>Iowa City</i>
B. A. Iowa, 1906	
Margaret Mary Mueller, <i>L.A.3</i>	<i>Iowa City</i>
Mary Theresa Mueller, <i>S.</i>	<i>Iowa City</i>
B. Ph. Iowa, 1902	
Oscar Otto Mueller, <i>L.2; L.A.u.</i>	<i>Van Meter</i>
Otto Henry Mueller, <i>M.2</i>	<i>Iowa City</i>
B. A. Iowa, 1903	
Vrgil Orin Muench, <i>M.1; S.</i>	<i>Pilate Mound</i>
Dayton Vir Mulhern, <i>L.1</i>	<i>East Peru</i>
Alfred William Mullan, <i>L.2</i>	<i>Waterloo</i>
Donald Gordon Mullan, <i>L.2</i>	<i>Pomeroy</i>
Bertha K. Mullen, <i>S.</i>	<i>Des Moines</i>
B. Ped. Western Union College, 1904	
Margaret Ione Mulnix, <i>L.A.2; Mus.</i>	<i>Dows</i>
John Carl Frederick Mundt, <i>L.A.u.</i>	<i>Humboldt</i>
Robert Beecher Carson Murdy, <i>M.2</i>	<i>Fort Madison</i>
Bernard Vincent Murphy, <i>L.A.3</i>	<i>Ida Grove</i>
Genevieve Beatrice Murphy, <i>S.</i>	<i>Iowa City</i>
B. A. Iowa, 1903	
William Thomas Murphy, <i>A.S.s.</i>	<i>Dike</i>
John Adolph Murray, <i>L.A.3</i>	<i>Little Sioux</i>
Charles Cline Myers, <i>A.S.1</i>	<i>Tipton</i>
Frank Martin Myers, <i>L.A.3</i>	<i>Beaman</i>
Ralph C. Myers, <i>A.S.1</i>	<i>Iowa City</i>
Walter Lawrence Myers, <i>L.A.3</i>	<i>West Branch</i>
Henry Albert Naberhuis, <i>A.S.4</i>	<i>Sioux Center</i>
Veva Gertrude Naiden, <i>L.A.2</i>	<i>Woodward</i>
Harry Ellsworth Narcy, <i>L.3</i>	<i>Spirit Lake</i>
Nelsine Laurine Nasby, <i>L.A.2</i>	<i>Estherville</i>
Fred Anson Nash, <i>D.u.</i>	<i>Nichols</i>
Nellie May Naylor, <i>L.A.3</i>	<i>Clear Lake</i>
Inez Louise Neal, <i>L.A.1</i>	<i>Wapello</i>
Edith Maie Nebe, <i>L.A.4; S.</i>	<i>Glenwood</i>
Katharine Louise Nebe, <i>L.A.u.</i>	<i>Glenwood</i>
Fred A. Neil, <i>D.3</i>	<i>Marshalltown</i>

Nora Juliann Nelson, <i>L.A.1</i>	<i>Postville</i>
Oscar Theodore Nelson, <i>A.S.2</i>	<i>Clinton</i>
Joseph Netolicky, <i>M.2</i>	<i>Western College</i>
B. S. Coe College, 1904	
George Auerbach Neustadt, <i>L.A.3</i>	<i>LaSalle, Ill.</i>
William James Neuzil, <i>M.4</i>	<i>Iowa City</i>
Lester F. Newbern, <i>M.3</i>	<i>De Witt</i>
Ethel Lucile Newcomb, <i>L.A.1</i>	<i>Atlantic</i>
Gertrude Kimball Newcomb, <i>L.A.4</i>	<i>Shell Rock</i>
Pearl William Newman, <i>A.S.1</i>	<i>Fort Madison</i>
Harold J. Nichols, <i>D.1</i>	<i>West Liberty</i>
Merle Starr Nichols, <i>M.s.</i>	<i>Williamstown, Mo.</i>
Ph. G. Highland Park College, 1906	
Thomas Channing Nichols, <i>D.1</i>	<i>Marshalltown</i>
Frank Ray Nickerson, <i>H.M.2</i>	<i>Gladbrook</i>
James Clark Nicoll, <i>L.1</i>	<i>Council Bluffs</i>
George Elmer Nikirk, <i>A.S.s.</i>	<i>Cedar Rapids</i>
Frederic Cornelius Nilsson, <i>M.2</i>	<i>Sioux Falls, S. D.</i>
Adelaide M. Nolan, <i>L.A.4</i>	<i>Iowa City</i>
Grover Cleveland Nolte, <i>L.3</i>	<i>Guttenberg</i>
Caroline Norris, <i>M.N.2</i>	<i>Cedar Rapids</i>
DeWitt Arunah Norton, <i>L.A.3</i>	<i>Newell</i>
Matt Earnest Nutt, <i>M.1</i>	<i>La Porte City</i>
Walter Sewell Nye, <i>D.3</i>	<i>Eldora</i>
Charles Lea Nyemaster, <i>L.1</i>	<i>Wapello</i>
Edith Frances O'Brien, <i>L.A.4</i>	<i>Iowa City</i>
Edward Raymond O'Brien, <i>L.1; L.A.u.</i>	<i>Oelwein</i>
Floyd B. O'Brien, <i>L.1</i>	<i>Ames</i>
Stephen Ambrose O'Brien, <i>M.1</i>	<i>Stuart</i>
Daniel Lawrence O'Hern, <i>L.2; L.A.u.</i>	<i>Barnum</i>
Agnes Gertrude O'Leary, <i>P.2</i>	<i>Iowa City</i>
James Leo Oakes, <i>L.A.2</i>	<i>Clinton</i>
Leon Morton Ochs, <i>M.1</i>	<i>Davenport</i>
Florence Margaret Odell, <i>L.A.4</i>	<i>Churdan</i>
Glenn Rosamond Ogden, <i>L.A.3</i>	<i>Williamsburg</i>
Harry Lamb Ogg, <i>A.S.3</i>	<i>Newton</i>
George Charles Oldag, <i>M.4</i>	<i>Luana</i>
B. S. Dixon College, 1908	
Hubert Leonard Olen, <i>L.A.4</i>	<i>Paullina</i>
George Henry Oleson, <i>D.2</i>	<i>Rock Falls</i>

Ole N. Olsen, S.	<i>Emmettsburg</i>
M. Di. Iowa State Normal, 1902	
Florentine Oliver, S.	<i>Neuva Caceres, P. I.</i>
Marcus Solomon Oliver, L.A.3	<i>Onawa</i>
Ralph Addison Oliver, L.A.4;L.1	<i>Onawa</i>
Forrest Bernell Olsen, L.A.2	<i>Lake Mills</i>
Clarence Leonard Olson, M.3	<i>Hampton</i>
Oliver Malvin Olson, L.A.2	<i>Alta</i>
William Harold Olson, A.S.4	<i>Rock Rapids</i>
Frederick Anton Ontjes, L.3;L.A.u.	<i>Aplington</i>
Minnie Emily Omerod, G.	<i>Marshalltown</i>
B. Ph. Iowa College, 1906	
Chester Arthur Orr, L.A.u.	<i>Iowa City</i>
Edgar Clair Orton, A.S.1	<i>Tipton</i>
Dean Hill Osborn, M.1	<i>Bozeman, Mont.</i>
Guy Osborne, A.S.1	<i>Iowa City</i>
Elias N. Osnes, A.S.s.	<i>Canton, S. D.</i>
Arthur Howard Otis, L.2	<i>Glenwood</i>
Caroline N. Otis, L.A.P.R.;S.	<i>Boone</i>
M. Di. Iowa State Normal, 1897	
George Stanley Otis, L.A.u.	<i>Monona</i>
Le Roy Theodore Ott, D.2	<i>Albia</i>
Realff Ottesen, L.1;L.A.u.	<i>Davenport</i>
Anges Elizabeth Otto, G.	<i>Iowa City</i>
B. S. Iowa, 1892	
Helen Otto, L.A.2	<i>Iowa City</i>
Henry C. Otto, P.Prac.1	<i>Clinton</i>
Lucia Caroline Otto, G.;S.	<i>Iowa City</i>
B. Ph. Iowa, 1902	
Arthur George Oudkirk, D.1	<i>Cedar Rapids</i>
James Bliss Owen, M.1	<i>Winterset</i>
Joseph Linton Packer, G.P.R.;S.	<i>Danville</i>
B. A. Whittier College, 1898	
James Blaine Padgham, M.2	<i>Dixon</i>
John Thomas Padgham, M.2	<i>Dixon</i>
Ashley Bennett Palmer, H.M.4	<i>Seattle, Wash.</i>
D. D. S. Iowa, 1887	
Inez Ethel Palmer, L.A.2;S.	<i>Spencer</i>
Ariel Parish, S.	<i>Cedar Falls</i>
M. Di. Iowa State Normal, 1905	
Jessie Augusta Parish, G.P.R.;S.	<i>Iowa City</i>
M. Di. Iowa State Normal, 1905; B. S. Iowa, 1906	

John Carl Parish, <i>G.;S.</i>	<i>Cedar Falls</i>
M. Di. Iowa State Normal, 1902; B. Ph. Iowa, 1905, <i>M. A.</i> , 1906	
Clarence M. Parker, <i>L.1;L.A.u.</i>	<i>Cedar Falls</i>
M. Di. Iowa State Normal, 1905	
Edward Stuart Parker, <i>M.3</i>	<i>Garden City, Minn.</i>
Ella Maud Parker, <i>S.</i>	<i>Mediapolis</i>
B. A. Iowa Wesleyan, 1902	
Edith Olive Parrish, <i>L.A.1</i>	<i>Bedford</i>
Edith May Parrott, <i>L.A.1</i>	<i>Iowa City</i>
Robert Wallace Parrott, <i>L.A.u.</i>	<i>Waterloo</i>
Hannah Louisa Parry, <i>L.A.1</i>	<i>Williamsburg</i>
Eva Amber Parsons, <i>H.M.N.2</i>	<i>Bates City, Mo.</i>
Hilaire Rousseau Parsons, <i>A.S.s.</i>	<i>Des Moines</i>
Irvin J. Pascoe, <i>M.1</i>	<i>Albia</i>
Maud Lyall Patrick, <i>S.</i>	<i>Iowa City</i>
B. L. Minnesota, 1886	
Joseph McKendrick Pattee, <i>M.1</i>	<i>Harlan</i>
Alpheus Wood Patterson, <i>M.3;S.</i>	<i>Fonda</i>
Jewell Morris Patterson, <i>H.M.1;G.</i>	<i>Iowa City</i>
B. A. Cornell College, 1906	
Wendell C. Patterson, <i>D.1</i>	<i>Iowa Falls</i>
Charles Wilbur Patton, <i>M.1</i>	<i>Marshalltown</i>
Harold Wherry Paul, <i>A.S.s.</i>	<i>Wyoming</i>
Mary Paulis, <i>L.A.3</i>	<i>Iowa City</i>
Jessie Bancroft Payne, <i>L.A.1</i>	<i>Nevada</i>
John Hyren Peck, <i>M.2</i>	<i>Anamosa</i>
Clarence Denis Pedersen, <i>L.2</i>	<i>Parkersburg</i>
Louis Pelzer, <i>L.A.P.R.;S.</i>	<i>Atlantic</i>
M. Di. Iowa State Normal, 1901; B. Ph. Iowa, 1907	
John Robert Pence, <i>M.2</i>	<i>Maquoketa</i>
Charles Penningroth, <i>L.A.2</i>	<i>..Tipton</i>
Fred H. Penniwell, <i>D.2</i>	<i>Leon</i>
Roe Ernest Percy, <i>D.3</i>	<i>Dexter</i>
James Owen Perrine, <i>L.A.2</i>	<i>Burlington</i>
Olive Perry, <i>L.A.1</i>	<i>Forest City</i>
Anny Maria Ernestine Caroline Petersen, <i>M.1</i>	<i>Davenport</i>
Henry John Peterson, <i>G.;S.</i>	<i>Story City</i>
B. A. St. Olaf College, 1905	
Thomas Arthur Pettepiece, <i>M.1</i>	<i>Freeport, Ill.</i>

*Paulyne Frederica Pflaum, <i>L.A.1;S.</i>	Clinton
Herbert Parker Phelps, <i>A.S.2</i>	Springdale
Agnes Pheney, <i>L.A.1</i>	Council Bluffs
Leon George Phillips, <i>D.1</i>	Chicago, Ill.
Philip Percy Phillips, <i>L.u.;L.A.u.</i>	Ottumwa
Walter Andrew Phillips, <i>L.1</i>	Iowa City
Bessie Louise Pierce, <i>L.A.1</i>	Iowa City
Elvero Hildegarde Pierson, <i>L.A.3</i>	Wallingford
Lee Ayres Piggott, <i>L.A.3;S.</i>	Hamilton, Ill.
Montgomery Everett Pike, <i>L.A.4;L.1</i>	Williamsburg
Robert Baxter Pike, <i>L.A.3</i>	Whiting
Harry Adelbert Pitman, <i>D.2</i>	Grinnell
Frank Thomas Plank, <i>D.2</i>	Winthrop
Vern Plum, <i>A.S.2</i>	Shelby
John Emerson Pond, <i>L.A.3</i>	Monticello
Margaret Louise Pond, <i>L.A.2</i>	Monticello
Wilbur Galena Pooley, <i>P.1</i>	Jefferson
Lee Wilbert Popp, <i>A.S.3</i>	Waterloo
M. Di. Iowa State Normal, 1904; B. S. Iowa, 1907	
Mary Monta Porter, <i>S.</i>	Albia
B. A. Iowa, 1904	
Van Alex Porter, <i>D.3</i>	Strawberry Point
Beth M. Portlock, <i>S.</i>	New London
B. S. Iowa, 1906	
Kineta de France Portlock, <i>L.A.2</i>	New London
Rolland William Pote, <i>D.2</i>	Stuart
Clifford Powell, <i>L.A.1</i>	Red Oak
Claude A. Power, <i>H.M.3</i>	Pulaski
B. S. Southern Iowa Normal, 1900	
Marion Ray Powers, <i>M.1</i>	Iowa City
Fred M. Pownall, <i>L.A.1</i>	Centerdale
Fred Julian Poyneer, <i>A.S.3</i>	Williamsburg
Philip Washabaugh Pratt, <i>A.S.1</i>	Sioux City
Henrietta Prentiss, <i>G.;S.</i>	Bloomsburg, Penn.
B. A. Smith College, 1902	
Forrest Milton Preston, <i>D.2</i>	Kingsley
Gertrude Elaine Preston, <i>S.</i>	Iowa City
Ph. B. Iowa, 1898	
Hiram T. Price, <i>L.2</i>	Iowa City
B. A. Iowa, 1906	

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Mildred Price, G.	<i>Iowa City</i>
B. A. Iowa, 1906	
George Cornelius Priester, A.S.1	<i>Rock Rapids</i>
Ermine Sara Puckett, L.A.2	<i>Iowa City</i>
Ralph Clarence Puckett, A.S.3	<i>Rock Rapids</i>
Roswell Clair Puckett, A.S.2	<i>Rock Rapids</i>
Frank Garfield Pugsley, L.A.4;S.	<i>.. Toledo</i>
Myrtle Emily Pullen, L.A.1	<i>Britt</i>
William Edward Purcell, L.1	<i>Clinton</i>
Roger Sherman Pursell, A.S.2	<i>Easton, Penn.</i>
Ula Mae Purvis, L.A.1	<i>West Liberty</i>
Edward Gross Quigley, G.P.R.;S.	<i>Moorehead, Minn.</i>
B. Ph. Iowa, 1906	
Louis Leroy Quigley, A.S.4	<i>Iowa City</i>
John J. Rae, S.	<i>Pocahontas</i>
Nell M. Rae, S.	<i>Massena</i>
Agnes Clarissa Ralph, G.	<i>Osage</i>
B. L. Wisconsin, 1893	
Cyrus Cleveland Rambo, M.1;L.A.u.	<i>Keosauqua</i>
Leon Ramis, D.Asst.1	<i>Iowa City</i>
Lee Everett Ranck, L.3	<i>Iowa City</i>
Esther Joy Randall, L.A.1	<i>Iowa City</i>
Frank Hall Randall, L.2	<i>Denison</i>
B. A. Iowa, 1902	
Henry Earl Randall, A.S.s.	<i>Big Rock</i>
Winfield Scott Randall, L.1	<i>Denison</i>
Meta Florence Raney, L.A.1	<i>Marengo</i>
Laura Frances Rate, L.A.2	<i>Iowa City</i>
Marie Erma Rath, L.A.1	<i>Denison</i>
Don Seavey Rathbun, G.P.R.	<i>Kingsley</i>
B. S. Cornell College, 1904	
William Peter Rawn, A.S.1	<i>Alta</i>
Mabel Shaw Ray, L.A.P.R.	<i>Lansing</i>
M. Di. Iowa State Normal, 1901	
William H. Ray, L.A.P.R.;S.	<i>Lansing</i>
M. Di. Iowa State Normal, 1901	
William Yale Raymond, A.S.1	<i>Iowa City</i>
Byron Justus Read, S.	<i>Mystic</i>
M. Di. Iowa State Normal, 1899	
Charles Franklin Reaney, A.S.u.	<i>Wellman</i>
William Franklin Reden, L.2	<i>Cresco</i>
Roy Addis Redfield, L.2	<i>Iowa City</i>
B. A. Iowa, 1906	

William Henry Redmond, <i>M.u.</i>	<i>Dysart</i>
Scott Leverett Reeburgh, <i>L.2</i>	<i>Battle Creek</i>
Frances Reed, <i>S.</i>	<i>Odebolt</i>
Glenn Freeman Reed, <i>D.2</i>	<i>Council Bluffs</i>
Ivy Leslie Reed, <i>G.P.B.;S.</i>	<i>Hepburn</i>
<i>M. Di. Iowa State Normal, 1900; B. Ph. Iowa, 1903; M. A., 1906</i>	
James Paul Reed, <i>L.3;L.A.u.</i>	<i>Muscatine</i>
<i>B. S. Valparaiso College, 1902</i>	
Paul Reed, <i>M.4.</i>	<i>Fairfield</i>
<i>B. A. Parsons College, 1896</i>	
Rose Charlotte Reeve, <i>L.A.u.</i>	<i>Iowa City</i>
Alice May Reever, <i>L.A.2</i>	<i>Laurens</i>
Gustavus Adolph Rehder, <i>L.A.s.</i>	<i>Gladbrook</i>
Mary Louise Reherd, <i>G.</i>	<i>Geneseo, Ill.</i>
<i>B. A. Iowa, 1906</i>	
Verne Vincent Reid, <i>A.S.2</i>	<i>Anamosa</i>
Roe Eugene Remington, <i>G.</i>	<i>Iowa City</i>
<i>B. A. Colorado, 1905</i>	
Agnes Remley, <i>L.A.4;G.</i>	<i>Anamosa</i>
Alice Remley, <i>L.A.4;Mus.</i>	<i>Iowa City</i>
Elsie Jeannette Remley, <i>L.A.1</i>	<i>Anamosa</i>
Robert Glass Remley, <i>L.A.3</i>	<i>Anamosa</i>
Fred Earl Renshaw, <i>L.1;L.A.u.</i>	<i>Inwood</i>
Beatrice Bartlett Reynolds, <i>L.A.4</i>	<i>Brayton</i>
Dorsey L. Rhodes, <i>L.3</i>	<i>Correctionville</i>
Dick Cornelius Rhynsburger, <i>A.S.4</i>	<i>Orange City</i>
George Laurence Rice, <i>D.1</i>	<i>Northwood</i>
Carl Ernest Richards, <i>M.4;L.A.u.</i>	<i>Red Oak</i>
John Loftus Richards, <i>D.2</i>	<i>Dunlap</i>
Carl B. Richardson, <i>L.1</i>	<i>Denison</i>
Earl Lemuel Richey, <i>D.2</i>	<i>Lone Tree</i>
Joseph Richmond, <i>A.S.s.</i>	<i>New York City</i>
Laurence Brenton Richmond, <i>P.1</i>	<i>Dallas Center</i>
Theodore Ricksher, <i>A.S.u.</i>	<i>Fairfield</i>
Graciano Rico, <i>A.S.2;S.</i>	<i>Jaro, P. I.</i>
Emilie Lillian Riddle, <i>L.A.u.;S.</i>	<i>Iowa City</i>
Thomas Thiel Rider, <i>D.2;G.</i>	<i>Iowa City</i>
<i>B. S. Iowa, 1906</i>	
Adele Agnes Ries, <i>L.A.1</i>	<i>Iowa City</i>
Alice Rigby, <i>G.</i>	<i>Mount Vernon</i>
<i>B. A. Cornell College, 1902; M. A. Iowa, 1906</i>	

Barold Rudolf Riedel, D.2	<i>Amsterdam, Holland</i>
Charles August Riemcke, L.A.4;M.2	<i>Muscatine</i>
Ph. G. Iowa, 1903	
Edith Gertrude Rigler, L.A.1	<i>Iowa City</i>
Harry Dean Riley, A.S.2	<i>Marseilles, Ill.</i>
Will Francis Riley, L.A.4;L.1	<i>Burlington</i>
Engelke Janssen Ringena, M.3	<i>Forest City</i>
Abel Gomer Rios, A.S.s.	<i>Guadalajara, Mexico</i>
Clara Belle Risser, L.1	<i>Des Moines</i>
B. Ph. Drake, 1902	
Thorwaldsen Sumner Risser, S.	<i>Danville</i>
B. Ph. Iowa College, 1904	
Adelaide Alice Rittenmeyer, L.A.4	<i>Iowa City</i>
Philip Embury Ritz, L.A.4;L.1	<i>Sergeant's Bluffs</i>
Alexander Cumming Robbie, G.	<i>Cedar Rapids</i>
B. A. Coe College, 1906	
Edwin Clyde Robbins, L.A.u.	<i>Cedar Rapids</i>
Carl Joseph Roberts, L.A.1	<i>Panora</i>
Vernon Roberts, M.4	<i>Williamsburg</i>
Willard Whittington Roberts, D.u.	<i>Epworth</i>
Clarence Walker Robertson, D.3	<i>Waterloo</i>
Alta Aileen Robinson, S.	<i>Iowa City</i>
B. Ph. Iowa, 1900; M. A., 1905	
Charles Hunter Robinson, M.u.	<i>Webster City</i>
Earl J. Robinson, L.1	<i>Fort Dodge</i>
Laura Clarke Rockwood, S.	<i>Iowa City</i>
B. Ph. Iowa, 1892; M. A., 1896	
Merle Clinton Rockwood, M.3	<i>Madelia, Minn.</i>
David Rodriguez, A.S.u.	<i>Mexico City, Mexico</i>
Howard Omar Rogers, L.3	<i>Cedar Falls</i>
Ora L. Rogers, P.2	<i>Kalona</i>
Ross Willard Rogers, D.2	<i>Fayette</i>
Thomas Lowry Rogers, M.2	<i>Minburn</i>
John George Rohrig, M.2;S.	<i>Iowa City</i>
Theodore Tasheira Roosevelt, Jr., D.3	<i>Ackley</i>
D. D. S. Iowa, 1907	
Edith May Root, L.A.u.	<i>Akron</i>
Ralph Eugene Root, G.	<i>Iowa City</i>
B. S. Morningside College, 1905	
Elroy Edward Rorick, L.A.3	<i>West Branch</i>
August Henry Rosburg, L.A.s.	<i>Hinton</i>
Bert Lawrence Rose, D.2	<i>Mt. Grove, Mo.</i>

John Townsend Rose, <i>H.M.2</i>	Toledo
Eddie Rosheim, <i>D.2</i>	Scarville
Tillie Jane Rosson, <i>L.A.1</i>	Beardstown, Ill.
Mary Rourke, <i>S.</i>	Farley
Benjamin W. Rowlen, <i>L.A.u.</i>	West Liberty
Morris Downs Rowland, <i>L.2</i>	Milton
Walter Merrill Rowles, <i>A.S.s.</i>	Turin
Wilmot Kingsbury Royal, <i>L.A.3</i>	Des Moines
Hilda Grace Victoria Rudy, <i>L.A.2;Mus.</i>	Decorah
Ole O. Rue, <i>L.3</i>	Ridgeway
Edward William Rueppel, <i>D.1</i>	Dysart
Clyde Orval Ruggles, <i>G.</i>	Winfield
A. B. Iowa State Normal, 1906	
Louis Fred Runge, <i>M.s.</i>	Davenport
Will D. Runyon, <i>M.3</i>	Corning
Mary Rush, <i>M.N.3</i>	Ainsworth
Grace Ella Russell, <i>G.</i>	Storm Lake
B. A. Buena Vista College, 1906	
John Russell, <i>M.1</i>	Brooklyn, Minn.
Ph. G. Highland Park College, 1906	
Herbert Alvin Ingram Rutledge, <i>S.</i>	Williamsburg
B. M. E. Iowa State College, 1894; B. S. Iowa, 1904	
Domingo San José, <i>A.S.s.</i>	Neuva Caceres, P. I.
Paul Sumner St. Clair, <i>L.2</i>	Des Moines
Theodore J. Saam, <i>S.</i>	Lansing
B. S. Lenox College, 1898; M. A. Iowa, 1903	
Roy Floyd Sackett, <i>M.4</i>	Chillicothe
George Joseph Sager, <i>L.2</i>	Waverly
Alta Belle Sample, <i>L.A.u.</i>	Iowa City
Fernando George Samson, <i>A.S.s.</i>	Mexico City, Mex.
Fannie Bruner Sandoe, <i>L.A.2</i>	Marshalltown
Harold Frank Sands, <i>L.1</i>	Clinton
Clarence Francis Sangston, <i>D.1</i>	Alta
John Gibson Sargent, <i>H.M.3;G.</i>	Dunlap, Kan.
B. A. Kansas, 1906	
Kathryn Louisa Sarles, <i>L.A.1;Mus.</i>	Monticello
Allen Sather, <i>M.3</i>	Willmer, Minn.
Shigeo Sato, <i>M.u.</i>	Hiroaki, Japan
Burr George Saville, <i>D.3</i>	Mt. Ayr
James Brown Saylor, <i>A.S.u.</i>	Milton
Joseph Bernard Scannell, <i>L.A.1</i>	Iowa City

Fred Conrad Schadt, <i>M.u.;L.A.u.</i>	<i>Amana</i>
Ph. G. Iowa, 1906	
Elias Fremont Schall, <i>L.A.P.R.;S.</i>	<i>West Liberty</i>
B. A. Iowa, 1907	
Harry Elmer Scheark, <i>A.S.2</i>	<i>Newton</i>
Adolf Bernhardt Scheel, <i>L.A.4</i>	<i>Remsen</i>
Charles Plume Schenck, <i>M.4;S.</i>	<i>Burlington</i>
B. S. Iowa, 1904	
Walter Leslie Schenck, <i>A.S.1</i>	<i>Burlington</i>
Ernest Alvin Schenk, <i>L.3</i>	<i>Clinton</i>
John Scherner, <i>A.S.3</i>	<i>Remsen</i>
Caroline Magdalene Schichtl, <i>L.A.3;G.</i>	<i>Algona</i>
Julia Ann Schichtl, <i>L.A.1</i>	<i>Iowa City</i>
William John Schindhelm, <i>A.S.2</i>	<i>Iowa City</i>
Lloyd Albert Schipfer, <i>M.4</i>	<i>Sigourney</i>
Amos Lincoln Schmalle, <i>L.A.1</i>	<i>Goodell</i>
Meta Erna Schmidt, <i>L.A.2</i>	<i>Marshalltown</i>
Adolph Otto Schmitt, <i>M.3</i>	<i>Clinton</i>
Emery Schmitz, <i>D.1</i>	<i>Brooklyn</i>
Fred W. Schmitz, <i>L.1</i>	<i>Brooklyn</i>
Henry Charles Schmitz, <i>D.2</i>	<i>Sterling, Ill.</i>
Philip James Schmitz, <i>M.1</i>	<i>Mt. Pleasant</i>
Frederick William Schnare, <i>L.3</i>	<i>Davenport</i>
Geneva Maria Schneider, <i>L.A.1</i>	<i>Iowa City</i>
Paul John Schneider, <i>L.A.1</i>	<i>Iowa City</i>
George Elmer Schnug, <i>M.1</i>	<i>Rolfe</i>
Alfred M. Schott, <i>A.S.u.</i>	<i>Sioux City</i>
Arthur Schramm, Jr., <i>L.1;L.A.u.</i>	<i>Burlington</i>
Elmer Cleland Schrock, <i>A.S.3</i>	<i>Iowa City</i>
Henrietta Mary Schrup, <i>L.A.1</i>	<i>Dubuque</i>
Minnie Antoinette Schuette, <i>L.A.2</i>	<i>Ackley</i>
Peter Schulte, <i>A.S.2</i>	<i>Norway</i>
Effie Helen Schultz, <i>L.A.1</i>	<i>Iowa City</i>
Lulu Sara Schultz, <i>S.</i>	<i>Iowa City</i>
Mildred Francis Schultz, <i>L.A.2</i>	<i>Burlington</i>
Walter Emanuel Schwob, <i>A.S.1</i>	<i>Wapello</i>
Andrew Peter Scott, <i>L.A.u.</i>	<i>Remsen</i>
Maude Scott, <i>M.N.1</i>	<i>Ft. Collins, Colo.</i>
Thomas Berryhill Scroggs, <i>L.A.4</i>	<i>Beresford, S. D.</i>
Levert Elizabeth Sears, <i>G</i>	<i>Osceola</i>
B. Ph. Grand Island College, 1901	

Albert Carl Emanuel Sederquist, <i>L.A.s.</i>	<i>Stanton</i>
Bertha Willa Seeds, <i>M.N.3</i>	<i>Washington, D. C.</i>
William Thomas Seeley, <i>M.2</i>	<i>Iowa City</i>
Helen Clara Seerley, <i>L.A.3</i>	<i>Cedar Falls</i>
M. Di. Iowa State Normal, 1906	
Viola Rosetta Seibert, <i>H.M.N.3</i>	<i>Forest City</i>
Aaron Exie Seidel, <i>L.1</i>	<i>Mason City</i>
Laila Fern Seitsinger, <i>L.A.2</i>	<i>Iowa City</i>
Frederic Walter Sellers <i>L.2</i>	<i>Cherokee</i>
Frank Ratcheffe Senska, <i>M.1</i>	<i>Storm Lake</i>
Henrietta Seymour, <i>L.A.2</i>	<i>Ottumwa</i>
Mabel Vivian Shalla, <i>L.A.2</i>	<i>Iowa City</i>
Fred Joseph Shannon, <i>P.1</i>	<i>Nichols</i>
Michael N. Shay, <i>L.1</i>	<i>Maloy</i>
Edward Parnell Shea, <i>L.1</i>	<i>Decorah</i>
Daniel Henry Sheehan, <i>L.2;L.A.u.</i>	<i>Watervliet, N. Y.</i>
James Edwin Shelledy, <i>D.1</i>	<i>Bloomfield, Neb.</i>
B. S. Bellevue College, 1906	
Karl Rose Shenkowitz, <i>M.2;L.A.u.</i>	<i>Dubuque</i>
Anna Lucile Shepard, <i>L.A.1</i>	<i>Iowa City</i>
Edward Charles Shepler, <i>L.A.1</i>	<i>Davenport</i>
Amos Sherbon, <i>M.1</i>	<i>Conrad</i>
Peter Jackson Sherlock, <i>M.1</i>	<i>Flagler</i>
Richard Charles Sherman, <i>M.1</i>	<i>Fort Dodge</i>
Stanton Locke Sherman, <i>L.A.1</i>	<i>Carroll</i>
Elizabeth Lewis Sherwood, <i>S.</i>	<i>Iowa City</i>
B. A. Iowa, 1881; M. A., 1903	
James Glenn Shifflett, <i>L.3</i>	<i>Malcom</i>
Bertha Shimek, <i>L.A.2</i>	<i>Iowa City</i>
Ella Shimek, <i>L.A.2</i>	<i>Iowa City</i>
Dan W. Shine, <i>M.3</i>	<i>Winthrop</i>
Martha Irene Shipman, <i>L.A.2</i>	<i>Iowa Falls</i>
William Erle Shontz, <i>L.A.1</i>	<i>Correctionville</i>
Edward Frank Shors, <i>L.s.</i>	<i>Pocahontas</i>
Hal Short, <i>A.S.1</i>	<i>Iowa City</i>
Arthur Chester Shouse, <i>D.3</i>	<i>Plankinton, S. D.</i>
Jessie C. Shrimplin, <i>S.</i>	<i>Mount Ayr</i>
B. A. Iowa, 1906	
Theo Edwina Shull, <i>L.A.1</i>	<i>Chicago, Ill.</i>
Lee Paul Sieg, <i>G.</i>	<i>Marshalltown</i>
B. S. Iowa, 1900; M. S., 1901	
Walter Russell Sieg, <i>A.S.4</i>	<i>Marshalltown</i>

Albert Frederick Siefert, *L.A.u.;S.*

Raymond William Sies, *L.A.4;S.*

George Franklin Sime, *L.1*

Anna Mary Simmers, *L.A.u.*

Charles Luther Simmers, *L.A.3*

M. Di. Iowa State Normal, 1906

Effie Amber Simmons, *H.M.N.3*

Howard Jackson Simmons, *M.1*

James Dan Simons, *M.1.*

Charles Gamble Simpson, *G.*

B. Ph. Cornell College, 1895; M. A., 1902

Samuel S. Simpson, *L.3*

Harry Arthur Singer, *L.A.1*

Mary Anastasia Sinnott, *L.A.1*

Imo Estella Sheller, *M.N.1*

Silas Emmett Skelly, *L.2;L.A.u.*

B. Ph. Iowa, 1905

De Nora Skinner, *L.A.3*

Gordon Ven Cleve Skonberg, *P. Prac.1*

Albert Arthur Slade, *L.A.u.*

George Edward Slaughter, *L.A.u.*

John William Saughter, *A.S.2*

Clara Josephine Slavata, *L.A.u.*

Jennie Elizabeth Slavata, *S.*

Ph. B. Iowa, 1901

Ralston William Sleeter, *M.2*

Sherman Ulysses Sleichter, *D.1*

William Eugene Sloat, Jr., *L.A.3*

Frederick Albert Slyfield, *M.3*

John Herbert Smalley, *L.A.u.*

Horace Hubert Smead, *D.2*

John Rider Smead, *L.2*

Ph. B. Upper Iowa, 1902

Abbie Pearl Thurber Smith, *L.A.2*

Addie Mahala Smith, *L.A.4*

Cecil Clifford Smith, *M.1*

Charles Arthur Smith, *L.A.u.;S.*

Charles Clifford Smith, Jr. *L.1*

Clifford Eben Smith, *M.1*

B. S. Bellevue College, 1906

Cora Belle Smith, *L.A.2*

Chippewa Falls, Wis.

Cedar Rapids

Northwood

Iowa City

South English

Wellman

Storm Lake

Ida Grove

Iowa City

Axtel, Kans.

Clearfield

Iowa City

Ladora

DeWitt

Sioux Rapids

Clinton

Tiffin

Bouton

Bouton

Iowa City

Iowa City

Storm Lake

Kalona

Denmark

Iowa City

Davenport

Iowa City

Iowa City

Iowa City

Duluth, Minn.

Iowa City

Iowa City

Davenport

Villisca

Stuart

Edgar Francis Smith, <i>M.3</i>	<i>Iowa City</i>
Frank Russell Smith, <i>A.S.2</i>	<i>Council Bluffs</i>
Franklin Orion Smith, <i>G.;S.</i>	<i>Iowa City</i>
<i>M. Di. Iowa State Normal, 1903; B. A. Iowa, 1906</i>	
Gertrude Edna Smith, <i>L.A.s.</i>	<i>Iowa City</i>
Harold John Smith, <i>A.S.2</i>	<i>West Liberty</i>
Herman Hale Smith, <i>L.A.2</i>	<i>Lamoni</i>
J. Ned Smith, <i>A.S.1</i>	<i>Iowa City</i>
Leon Osmer Smith, <i>L.A.1</i>	<i>Paullina</i>
Minnie Smith, <i>S.</i>	<i>Nilwood, Ill.</i>
Nellie Lucinda Smith, <i>S.</i>	<i>Winterset</i>
<i>M. Di. Iowa State Normal, 1900</i>	
Paul Warren Smith, <i>L.2;L.A.u.</i>	<i>Waterloo</i>
Ralph Eugene Smith, <i>L.A.2</i>	<i>Le Mars</i>
Raymond Ellson Smith, <i>L.A.2</i>	<i>Ida Grove</i>
William Henry Smith, <i>D.2</i>	<i>Belle Plaine</i>
Lillie May Snyder, <i>L.A.1</i>	<i>Colfax</i>
Carl Johannes Södergren, <i>G.;P.R.</i>	<i>Burlington</i>
<i>A. B. Augustana College, 1891; A. M., 1903</i>	
Melvin P. Somes, <i>L.A.u.</i>	<i>Fort Dodge</i>
Thorkel Eugene Sondrol, <i>L.A.2</i>	<i>Clear Lake</i>
Fred Dane Soper, <i>A.S.1</i>	<i>Davenport</i>
Anna Marie Sorensen, <i>L.A.4;S.</i>	<i>Hampton</i>
S.T. Spangler, Jr., <i>L.A.2</i>	<i>Winthrop</i>
Bertha E. Sparks, <i>L.A.3;S.</i>	<i>Iowa City</i>
Mae Elizabeth Agnes Spiedel, <i>G.;S.</i>	<i>Iowa City</i>
<i>B. A. Iowa, 1904</i>	
Leslie Eugene Spencer, <i>A.S.u.</i>	<i>Allerton</i>
George Albert Spillane, <i>A.S.1</i>	<i>Iowa City</i>
Alice Teresa Stach, <i>L.A.2</i>	<i>Iowa City</i>
Celia Iva Stackman, <i>L.A.1</i>	<i>West Branch</i>
Carl DeWitt Stanard, <i>D.2</i>	<i>North English</i>
John Gruell Stanley, <i>D.2</i>	<i>Prescott</i>
Neva Grace Starrett, <i>L.A.1;Mus.</i>	<i>Iowa City</i>
Vincent Starzinger, <i>L.A.2</i>	<i>Des Moines</i>
Madeline Daisy Stauffer, <i>L.A.1</i>	<i>Eidon</i>
Eliza Rollin Stealy, <i>D.3</i>	<i>Pierre, S. D.</i>
Bertha Elizabeth Schenck Stecker, <i>M.4</i>	<i>Burlington</i>
Leopold Louis Steckmest, <i>L.1</i>	<i>Peterson</i>
Kenneth David Steere, <i>L.1</i>	<i>Iowa Falls</i>
<i>B. A. Iowa, 1906</i>	

George Williams Stephenson, <i>L.A.s.</i>	<i>Burlington</i>
Ellen Sterling, <i>H.M.N.2</i>	<i>Brooklyn</i>
Harry Holdridge Stevens, <i>D.3</i>	<i>Zumbro Falls, Minn.</i>
Mary Caroline Stevens, <i>L.A.u.</i>	<i>Iowa City</i>
Samuel Kirkwood Stevenson, <i>L.3</i>	<i>Iowa City</i>
<i>B. Ph. Iowa, 1898</i>	
Clara Belle Stewart, <i>L.A.s.</i>	<i>Keota</i>
Emma Lois Stewart, <i>L.A.s.</i>	<i>Keota</i>
George Anthony Stewart, <i>A.S.u.</i>	<i>Iowa City</i>
Rolland Maclaren Stewart, <i>G.;S.</i>	<i>Toledo</i>
<i>B. A. Iowa, 1904</i>	
Walter Leslie Stewart, <i>L.A.1</i>	<i>Des Moines</i>
William Earl Stewart, <i>L.A.1</i>	<i>Grimes</i>
William Lloyd Stewart, <i>M.4</i>	<i>Mt. Pleasant</i>
Fred Bailey Stiles, <i>A.S.1</i>	<i>Cherokee</i>
Frances Stimson, <i>S.</i>	<i>Conway</i>
Margaret May Stimson, <i>L.A.3;S.</i>	<i>Conway</i>
Edmund D. Stinson, <i>L.A.4</i>	<i>Red Oak</i>
Bessie L. Stockwell, <i>H.M.N.1;S.</i>	<i>Belle Plaine</i>
Gustave Llewellyn Stoechr, <i>M.2</i>	<i>Central City</i>
<i>Ph. G. Valparaiso College, 1897</i>	
Clara Luella Stoltenberg, <i>L.A.1</i>	<i>Davenport</i>
Henry Arthur Stoltenberg, <i>M.1</i>	<i>Avoca</i>
Irene Stone, <i>L.A.1</i>	<i>Iowa City</i>
Merle Rufus Stone, <i>A.S.4</i>	<i>Hawarden</i>
Dayton Stoner, <i>L.A.4</i>	<i>Iowa City</i>
Nellie Dae Stoner, <i>L.A.4</i>	<i>Iowa City</i>
Wade Carlisle Stoops, <i>A.S.4</i>	<i>West Liberty</i>
Eunice Storer, <i>L.A.4</i>	<i>Mason City</i>
Joseph Earl Storey, <i>D.1</i>	<i>Storm Lake</i>
William Marshall Storey, <i>L.A.s.</i>	<i>Storm Lake</i>
Ashley Van Storm, <i>G.</i>	<i>Iowa City</i>
<i>Ph. B. Illinois Wesleyan, 1898</i>	
Shirley Snow Storm, <i>L.A.1</i>	<i>Iowa City</i>
Edward Oliver Stolls, <i>M.1;L.A.u.;S.</i>	<i>Riverside</i>
Clyde Homer Stouffer, <i>D.3</i>	<i>Gladbrook</i>
<i>A. B. Western College, 1904</i>	
Clare Agne Stout, <i>D.2</i>	<i>Tipton</i>
Horace Leslie Strain, <i>S.</i>	<i>Iowa City</i>
<i>B. A. Knox College, 1890; B. D. Chicago Theological Seminary, 1896</i>	

Joanna Glead Strange, S.	<i>Sioux City</i>
B. A. Iowa, 1906	
Jessica Elizabeth Strawbridge, L.A.2	<i>Sigourney</i>
Harley Orthus Strawn, A.S.2	<i>Sigourney</i>
Joseph Nicholas Streff, L.3	<i>Alton</i>
M. Di. Iowa State Normal, 1904	
Ida Maria Strike, S.	<i>Charles City</i>
Arthur Churchill Strong, M.2; L.A.u.	<i>Burlington</i>
Hugh Patrick Stuart, L.3	<i>Dubuque</i>
Eli E. Stutsman, M.1	<i>Iowa City</i>
Isaac Edward Stutsman, L.A.2	<i>Toledo</i>
Bertha Sunier, S.	<i>Iowa City</i>
B. A. Iowa, 1905; M. A., 1906	
Lucy Sunier, L.A.1	<i>Iowa City</i>
Ernest Dee Sutherland, L.A.1	<i>Manning</i>
Minerva Grace Swaney, L.A.s.; S	<i>Manning</i>
Joe Ray Swartzendruber, D.3	<i>Kalona</i>
Walter James Sweesy, L.2	<i>Maquoketa</i>
B. S. Cornell College, 1904	
Hazel Marie Sweet, L.A.4	<i>Jefferson, S. D.</i>
Jennie Maude Sweitzer, M.N.2	<i>Algona</i>
Harold Myron Swettart, A.S.1	<i>Iowa City</i>
Edith Margaret Swire, L.A.3	<i>Iowa City</i>
Alice Swisher, L.A.4; Mus.	<i>Iowa City</i>
Charles Lovell Swisher, L.A.1	<i>Iowa City</i>
Helen Swisher, L.A.2	<i>Iowa City</i>
Pauline Swisher, L.A.2	<i>Iowa City</i>
Lloyd William Swords, L.1	<i>Iowa City</i>
Ethel Pearl Sykes, L.A.1	<i>Mason City</i>
Reuel Hull Sylvester, L.A. P.B.; S.	<i>Malcom</i>
M. Di. Iowa State Normal, 1904	
Blanche Irene Taake, L.A.1	<i>Des Moines</i>
Sara Amelia Talbott, L.A.2	<i>Marengo</i>
Aaron Vedder Tallman, A.S.s.	<i>Boise, Ida.</i>
Maurice Henry Tallman, H.M.1	<i>Boise, Ida.</i>
John Mills Tate, D.2	<i>State Center</i>
Arthur Laurie Tatum, G.	<i>West Branch</i>
B. S. Penn College, 1905	
Mattie Ione Taylor, L.A.1	<i>Monteruma</i>
Thomas Teakle, S.	<i>Storm Lake</i>
M. Di. Iowa State Normal, 1904	
Harry Teege, D.2	<i>Cedar Rapids</i>

STUDENTS

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Frank Ellsworth Tellier, <i>G.P.R.</i>	<i>Sutherland</i>
A. B. Iowa College, 1898; M. A. Iowa, 1905	
Dickie Mae Tennant, <i>L.A.u.</i>	<i>Oskaloosa</i>
Charles Luther Tennant, <i>G. P.R.</i>	<i>Burlington</i>
Ph. B. Iowa Wesleyan, 1900; M. A., 1905	
Lettie Adeline Thedens, <i>L.A.1</i>	<i>Lyons</i>
Forrest McLeod Theobald, <i>L.A.1</i>	<i>Manilla</i>
George Thom, Jr., <i>L.3</i>	<i>Correctionville</i>
Leo David Thoma, <i>L.A.4</i>	<i>Fairfield</i>
Roscoe Petzinger Thoma, <i>L.A.4</i>	<i>Fairfield</i>
B. A. Parsons College, 1906	
Albert Jacob Thomann, <i>L.A.u.</i>	<i>Brighton</i>
Abram Owen Thomas, <i>G.P.R.;S.</i>	<i>Williamsburg</i>
B. Ph. Iowa, 1904	
Cleveland Langrage Thomas, <i>D.3</i>	<i>Washington</i>
D. D. S. Iowa, 1907	
Cyrus Henry Thomas, <i>S.</i>	<i>Kirkville</i>
Franklin Thomas, <i>A.S.3</i>	<i>Red Oak</i>
Henry David Thomas, <i>M.1.;S.</i>	<i>Gilmore City</i>
Jessie Marie Thomas, <i>L.A.4</i>	<i>Burlington</i>
Samuel Lenhart Thomas, <i>S.</i>	<i>Council Bluffs</i>
Seth Thomas, <i>S.</i>	<i>Letart, W. Va.</i>
B. Ph. Iowa, 1904; M. A., 1906	
Henry R. Thomassen, <i>A.S.s.</i>	<i>Pella,</i>
Arthur Peter Thompson, <i>M.2</i>	<i>Fort Dodge</i>
Edward William Thompson, <i>P.2</i>	<i>Des Moines</i>
Effie Louise Thompson, <i>L.A.4;Mus.</i>	<i>Iowa City</i>
Ella Margaret Thompson, <i>L.A. P.R.;S.</i>	<i>Summerset</i>
Fred James Thompson, <i>D.u.</i>	<i>Redwood Falls, Minn.</i>
John Wesley Thompson, <i>S.</i>	<i>Wapello</i>
Margaret Adelaide Thompson, <i>L.A.3</i>	<i>Iowa City</i>
Ray Harlan Thompson, <i>L.A.1</i>	<i>Manilla</i>
William Burton Thornburgh, <i>L.A. P.R.;S.</i>	<i>Seymour</i>
Nina Ruth Thorson, <i>L.A.1</i>	<i>Northwood</i>
Thorwald Thorson, <i>L.A. P.R.;S.</i>	<i>Forest City</i>
Alice Emeline Thurston, <i>S.</i>	<i>Rockford, Ill.</i>
B. A. Michigan, 1901	
Harry Marelle Tiffany, <i>S.</i>	<i>Chelsea</i>
Claude Baker Tice, <i>L.A.s.</i>	<i>Dixon, S. D.</i>
Eugene Herbert Tilton, <i>L.A.1</i>	<i>Harlan</i>
Grace Mabel Titus, <i>L.A.2</i>	<i>Ortranto Station</i>
Hazeldean Olive Toof, <i>L.A.1</i>	<i>Grinnell</i>

Everett Arthur Toogood, <i>L.2</i>	<i>Grundy Center</i>
Hannah Toomey, <i>M.N.1</i>	<i>Woodward</i>
Bertha Viola Elizabeth Tostlebe, <i>M.N.1</i>	<i>Cedar Falls</i>
Emil Nathan Tostlebe, <i>D.2</i>	<i>Cedar Falls</i>
Idylene Mabel Tovey, <i>L.A.2;S.</i>	<i>Des Moines</i>
Frank Alfonso Towne, <i>D.u.</i>	<i>Jamaica</i>
Roy Salem Towne, <i>D.3</i>	<i>Denison</i>
Leta Elaine Towner, <i>L.A.1</i>	<i>Corning</i>
Emily Frances Trafford, <i>S.</i>	<i>West Branch</i>
William Edmund Treichler, <i>L.A.1</i>	<i>Tipton</i>
Anna Treimer, <i>L.A.4</i>	<i>Dixon</i>
Margaret Tremaine, <i>L.A.4</i>	<i>Cedar Rapids</i>
Le Roy Richard Tripp, <i>M.u.</i>	<i>Washington</i>
Lloyd Russell Tucker, <i>L.A.1</i>	<i>Marseilles, Ill.</i>
Fred Tunnicliff, <i>A.S.1</i>	<i>Shenandoah</i>
Ruth Lillian Tuthill, <i>L.A.1</i>	<i>Centerville</i>
Horace Anthony Tweed, <i>S.</i>	<i>Forest City</i>
<i>B. S. Iowa, 1906</i>	
Granville Howard Twining, <i>M.u.</i>	<i>Des Moines</i>
<i>B. S. Northwestern, 1905; M. S., 1906</i>	
Grace Clarissa Tyler, <i>L.A.4</i>	<i>Columbus Junction</i>
<i>B. A. Iowa, 1907</i>	
Hyman Joseph Udinsky, <i>A.S.s.</i>	<i>Jersey City, N. Y.</i>
Irma Augusta Uhde, <i>L.A.1</i>	<i>Davenport</i>
Stanley William Ullom, <i>D.1</i>	<i>Alta</i>
Clifford Merland Unger, <i>D.1;L.A.u.</i>	<i>La Porte City</i>
Rafael G. Ungson, <i>A.S.2;S.</i>	<i>Lingayen, P. I.</i>
Curtis G. Updegraff, <i>L.A.u.</i>	<i>Sigourney</i>
Pearl Editha Usher, <i>L.A.1</i>	<i>Nashua</i>
Lulu Utley, <i>L.A.1</i>	<i>New Hampton</i>
Earl Roscoe Utterback, <i>A.S.1</i>	<i>Iowa City</i>
Orie Elmer Van Doren, <i>D.3</i>	<i>Indianola</i>
<i>D. D. S. Iowa, 1907</i>	
Walter C. Van Houten, <i>L.2</i>	<i>Lenox</i>
Edward Marion Van Metre, <i>L.A.1</i>	<i>Tipton</i>
Harold Van Metre, <i>L.A.1</i>	<i>Tipton</i>
Paul Winterstein Van Metre, <i>M.1</i>	<i>Waterloo</i>
Isis Bee Van Ness, <i>L.A.1</i>	<i>Centerville</i>
Orpha May Van Ness, <i>L.A.4</i>	<i>Centerville</i>
Victor Van Tausk, <i>G.;L.u.</i>	<i>Hills</i>
William Henry VanTiger, <i>L.A.1</i>	<i>Iowa City</i>

John Elmer VanTuyl, P.1	Denmark
Pearl VanTuyl, S.	Nichols
Carolyn VanVliet, L.T.S.	Pella
James Elmer Van Wert, S.	Oelwein
Alice Wilhelmine Vaala, L.A.3	Saude
Lillian Valentine, L.A.s.	Casey
Frederick William Valkenaar, M.4	Bridgewater, S. D.
Julian Vallarta, A.S.2	San Isidro, P. I.
Clarence Fisher Vanatta, L.A.1	West Liberty
Lumir Frank Vane, D.3	Cedar Rapids
Francis Varga, L.A.s.	Leon
Frank Vasku, L.A.4	Bendon, S. D.
Clara Marinza Vermillion, S.	Iowa City
Flossie Blossom Vest, S.	Montezuma
Franklin Earl Vestal, L.A.2	Warsaw, Ill.
Helen Marie Vogt, L.A.3	Iowa City
Mable Montgomery Volland, (Mrs.) G.	Iowa City
B. A. Iowa, 1906	
Henry Gottlieb Vollmer, A.S.u.	Burlington
Edward Oscar Vollum, M.3	Lerdal, Minn.
A. B. Luther College, 1904	
Lida Voorhees, S.	Valley Junction
Hertha Louise Voss, G.	Davenport
B. Ph. Iowa, 1904	
Otto Rudolph Voss, M.4	Davenport
Carl Henry Wachenfeld, M.4	Iowa City
Ruby Clare Wade, G.	Mount Vernon
B. A. Cornell College, 1905	
George Wadsworth, L.A.1	Brooklyn
Ernest John Henry Wagner, A.S.2	Vinton
Helen Alberta Walburn, L.A.2	Osceola
Elvira Lewis Walker, L.A.u.;S.	Iowa City
Agnes Edith Wallace, L.A.3	Quasqueton
M. Di. Iowa State Normal, 1903	
Arthur Clarence Wallace, L.2	Rock Rapids
B. S. Iowa, 1906	
Ray Harold Wallace, D.2	Vinton
Florence Estelle Waller, L.A.2	Charles City
Florence Elvira Wallin, L.A.4.;S.	Stanton
Rudolph Bernard Wallin, L.A.s.	Stanton
Gladys Walpole, L.A.1;Mus.	Rock Valley

John Graney Walsh, M.4	<i>Perry</i>
B. S. Iowa, 1903	
Earl Philip Walter, L.3	<i>Hartley</i>
James Blaine Walton, D.2	<i>Webster City</i>
Theodore Albert Wanerus, L.A.1	<i>Brighton</i>
Everett Chapman Ward, M.4	<i>Renwick</i>
Clarence Walter Ware, P.2	<i>Spirit Lake</i>
Oliver Faxon Ware, A.S.s.	<i>Denmark</i>
Henry Jacob Warner, L.1	<i>Clarence</i>
J. Will Warren, A.S.1	<i>West Liberty</i>
Tingle Thomas Warren, A.S.1	<i>Wapello</i>
Roy Booth Washburn, D.3	<i>Humbird, Wis.</i>
Clarence Wycliffe Wassam G.	<i>Iowa City</i>
M. Di. Iowa State Normal, 1900; B. Ph. Iowa, 1903; M. A., 1904	
Ella Betts Waterbury, G.	<i>Iowa City</i>
B. A. Iowa, 1905	
Flora Avis Waterbury, L.A.4	<i>Iowa City</i>
Mabel Waterbury, L.A.1	<i>Dayton</i>
Isaiah John Waterman, M.2	<i>Creston</i>
Edward Engle Watson, A.S.1	<i>Rock Rapids</i>
Grover Cleveland Watson, L.3	<i>Iowa City</i>
Carrie Charlotte Watters, L.A.4;G.	<i>Irwin</i>
William Oral Watters, L.3	<i>Fairfield</i>
B. S. Parsons College, 1904	
Katherine Starr Weaver, L.T.S	<i>Fort Smith, Ark.</i>
Lorena May Webber, L.A.s.	<i>Iowa City</i>
William Wert Weber, H.M.1	<i>Iowa City</i>
Ida Mae Webster, S.	<i>Lincoln, Ill.</i>
Christian H. Wegerslev, L.u.	<i>Alta</i>
George Frederick Wegner, L.A.1	<i>Adair</i>
Charles Richard Weir, D.3	<i>Cumberland</i>
Wayne Weatherbee Weitgenant, P.1	<i>Ossian</i>
Clement Joseph Welch, L.1	<i>Muscatine</i>
Henry Antes Wells, A.S.s.	<i>Kalona</i>
Ira Heydon Wells, D.3	<i>Russeli</i>
Nelson Drew Wells, M.4	<i>Mt. Pleasant</i>
Ph. B. Iowa Wesleyan, 1901	
Eddie Melvin Wertz, P.1	<i>Kalona</i>
Wallace Wernli, L.A.s.	<i>Le Mars</i>
Myrta Gertrude West, G. P.R.;S. .	<i>Irwin</i>
B. A. Iowa, 1906	

Irma Katharine Westenhaver, L.A.1	<i>Iowa City</i>
Soren S. Wesley, M.2	<i>Northwood</i>
Arthur De Witt Whedon, L.A.4;S.	<i>Iowa City</i>
Forrest Z. Wheeler, G.	<i>Cedar Falls</i>
M. Di. Iowa State Normal, 1902; B. A., 1906	
Merritt Whitacre Wheeler, M.1;G.	<i>Cedar Falls</i>
A. B. Iowa State Normal, 1906	
Frank Benjamin Whinery, D.1	<i>Marshalltown</i>
Edna Alberta Whitacre, L.A.2	<i>West Liberty</i>
Abigail Elvira White, L.A.4	<i>Wellpinit, Wash.</i>
Anna Margaret White, L.A.1	<i>Iowa City</i>
Clarence Lester White, A.S.2	<i>Centerville</i>
Edith Emerson White, L.A.u.	<i>Marion</i>
Raymond Patrick White, A.S.1	<i>Iowa City</i>
Roy Allen White, A.S.3	<i>Beaver Bay, Minn.</i>
Tullius Vernon White, L.A.4;L.1	<i>Iowa City</i>
Nathan Dudley Whiting, L.2	<i>Iowa City</i>
Ph. G. Iowa, 1904	
Ferdinand Frederick Wieben, M.2	<i>Dysart</i>
Callie Wieder, L.A.1	<i>West Branch</i>
Mary De Voll Wilcox, G.	<i>Iowa City</i>
A. B. Smith College, 1888	
Harry Ordell Wilkes, L.2	<i>Centerville</i>
Maude Madge Wilkins, M.N.1	<i>Victor</i>
Charles William Wilkinson, D.3	<i>Brooklyn</i>
George Robert Wilkinson, D.2	<i>West Liberty</i>
Harry Blaine Wilkinson, L.A.3;M.1	<i>Brooklyn</i>
Levi Jennings Wilkinson, M.4	<i>West Liberty</i>
Frank Arthur Will, M.2	<i>Des Moines</i>
Clarence Elvin Willcult, M.2	<i>Schaller</i>
Frieda Dora Wille, L.A.u	<i>Iowa City</i>
Otto Victor Wille, S.	<i>Iowa City</i>
B. S. Iowa, 1905	
Frederick Ewing Willett, M.2	<i>Woodbine</i>
B. S. Colorado College, 1905	
Hugh Owen Williams, M.1	<i>Lake Crystal, Minn.</i>
Leigh Laurence Williams, L.A.4;L.1	<i>Iowa Falls</i>
Mabel Clare Williams, S.	<i>Coralville</i>
Ph. B. Iowa, 1899; Ph. D., 1903	
Thomas Jefferson Williams, M.3	<i>Williamsburg</i>
James William Williamson, M.2;L.A.u.	<i>Elberon</i>

Bertha Belle Willis, S.	<i>Iowa City</i>
Ph. B. Iowa, 1901	
Earl Clifton Willis, L.A.4	<i>Clarksville</i>
Theodore Alan Willis, H.M.1	<i>Iowa City</i>
Marian Orr Willson, M.4	<i>Iowa City</i>
Alice Caliste Wilson, L.A.2	<i>Waterloo</i>
Carrie Adelle Wilson, L.A.2	<i>Malvern</i>
Charles Wilson, A.S.u.	<i>Winnipeg, Can.</i>
Clarence Erroll Wilson, L.A.s.	<i>Correctionville</i>
George Allison Wilson, L.3	<i>Menlo</i>
Ida May Wilson, L.A.4	<i>Cedar Falls</i>
M. Di. Iowa State Normal, 1900	
James Matthew Wilson, D.3	<i>Iowa City</i>
Ph. G. Highland Park College, 1899	
Laurence Edgar Wilson, A.S.1	<i>Washington</i>
Malcolm Earl Wilson, L.A.4	<i>Rock Rapids</i>
Nellie Elizabeth Wilson, L.A.2	<i>Washington</i>
Viva A. Wind, L.A.1	<i>Council Bluffs</i>
Edward J. Wintenburg, M.4	<i>Lamont</i>
Michael Henry Winters, D.1	<i>Mt. Pleasant</i>
Ray Harvey Wise, L.A.1	<i>Paton</i>
John Henry Witte, Jr., L.A.1	<i>Burlington</i>
William Eugene Wolcott, M.1	<i>Battle Creek</i>
Cressy C. Wolfe, L.2	<i>Panora</i>
William Allen Wolfe, D.2	<i>Finton</i>
Mary Louise Wombacher, L.A.u.	<i>Iowa City</i>
Adelia Marilla Wood, L.A.u.	<i>Iowa City</i>
Charles David Wood, G.;S.	<i>New Providence</i>
B. S. Penn College, 1905	
Harry T. Wood, D.3	<i>Cedar Rapids</i>
Mildred Grace Wood, L.A.u.	<i>Iowa City</i>
Rollin Webster Wood, M.1	<i>Brooklyn</i>
Roscoe James Woodard, S.	<i>Ottumwa</i>
Dick Woodcock, M.4	<i>Waverly</i>
George Raymond Woodhouse, M.3	<i>Wilton</i>
E. B. Woodruff, L.A.2	<i>Correctionville</i>
John Perry Woodruff, L.A.4	<i>Denison</i>
M. Di. Iowa State Normal, 1900	
Allie Lumina Woods, L.A.u.	<i>Iowa City</i>
Arthur Daniel Woods, G.;S.	<i>Greenfield</i>
M. D. Iowa, 1906	

Mary Louise Woods, *G.*

Iowa City

B. A. Iowa, 1906

Carleton Hutchins Woodward, *L.3*

Council Bluffs

John Melvin Woodworth, *L.A.4;L.1*

Ida Grove

Leonard Forrest Woodworth, *M.3*

Ida Grove

Cecil Workman, *H.M.N.2*

Lake City

Leslie Oren Worley, *L.A.u.;S.*

Iowa City

Theodore Plaskitt Worsley, Jr., *L.A.s,*

Nevada

Georgia Y. Worster, *L.A.u.;Mus.*

Adel

James William Wray, *A.S.s.*

Corydon

Ernest Joseph Wright, *L.A.1*

Shenandoah

B. S. Western Normal College, 1906

John Robert Wright, *L.A.4;S.*

Knoxville

Jonathan Eugene Wright, *A.S.2*

Plato

Katherine Wright, *M.N.1*

Knoxville

Marie Louise Wright, *L.A.1*

Fort Dodge

May Lydia Wright, *L.A.4*

Cedar Falls

M. Di. Iowa State Normal, 1902

Roberta Wright, *L.A.2;Mus.*

Fort Dodge

William Coutts Wright, *A.S.4*

Tipton

Frank Crail Wyant, *A.S.1*

Waterloo

John Junius Wyckoff, *P.1*

Sioux City

Alma Jane Wyland, *L.A.3*

Harlan

Irene Caroline Yavorsky, *L.A.3*

Iowa City

Charles Yeager, *L.A.4;S.*

Crawfordsville

Charles Otis Yenrich, *M.1*

Ashton, Ill.

Frank Augustus Yerger, *P.1*

Sigourney

Arthur M. Yessler, *D.2*

Cedar Rapids

Christian Yetter, *L.A.1*

Iowa City

Gerald Alan Yoakum, *L.A.1*

Tama

Alice Emily Yocom, *L.A.4*

Oskaloosa

Dalma Eloise Young, *S.*

Jefferson

David Lawrence Young, *L.3;G.;S.*

Sioux City

Ph. B. Morningside College, 1905

Frank Edward Young, *A.S.1*

Logan

Frederick Charles Young, *A.S.1*

Woodbine

Howard Young, *H.M.2*

Anamosa

Samuel Ross Young, *L.A.1*

Manchester

Sven Gustaf Youngert, *G.P.R.;S.*

Rock Island, Ill.

B. D. Augustana College, 1899; A. B., 1901

Edward Zeithammel, D.2	<i>Iowa City</i>
Victor Ziegler, A.S.2	<i>Marion</i>
Winfield Scott Ziegler, D.3	<i>Lyons</i>
Edwin Zoller, M.s.	<i>Davenport</i>

THE SCHOOL OF MUSIC
(Affiliated)

Lelah Evelyn Busselle	<i>Wichita, Kans.</i>
Irma Chatham	<i>Iowa City</i>
Madge Marcella Churchill	<i>Iowa City</i>
Alice Louise Clapp	<i>Davenport</i>
Marjory Eames Coast	<i>Iowa City</i>
Clara Consamus	<i>Iowa City</i>
Norma Eda Coover	<i>Iowa City</i>
Mildred Louise De Lano	<i>Lone Tree</i>
Ethel Fay Denton	<i>Nebraska City, Neb.</i>
Esther Florence Duley	<i>Iowa City</i>
Agnes Genevieve Flannagan	<i>Iowa City</i>
J. Gilbert Fye	<i>Ollie</i>
Anna Stasia Hogan	<i>Iowa City</i>
Sadie Gregg Holiday	<i>Burlington</i>
Marie Adelaide Legg	<i>Iowa City</i>
Emma Lumsden	<i>Iowa City</i>
Alice Florence McGee	<i>Iowa City</i>
B. Ph. Iowa, 1901; M. A., 1904	
Marie Catherine Gertrude McKinley	<i>Iowa City</i>
Ione Belle Maggard	<i>Iowa City</i>
Raymond Nugent Marshall	<i>Ollie</i>
Vega Ella Mekota	<i>Iowa City</i>
L. B. Mercer	<i>Iowa City</i>
Hope Moler	<i>Iowa City</i>
Mildred Martha Morrison	<i>Iowa City</i>
Sara Louise Morsman	<i>Iowa City</i>
Vance Morton	<i>Iowa City</i>
Dorothy Musser	<i>Iowa City</i>
Nellie Blanche Nichols	<i>West Liberty</i>
Margaret Nicola	<i>Nichols</i>

STUDENTS

573

Veda Evelyn Pike	<i>Iowa City</i>
Margaret Budington Plum	<i>Iowa City</i>
B. A. Vassar College, 1900	
Edwin Bay Raymond	<i>Iowa City</i>
Esther McDowell Swisher	<i>Iowa City</i>
B. A. Iowa, 1901	
Mabel Ruth Van Tuyle	<i>Iowa City</i>
Lucy Wilson	<i>Iowa City</i>
Carrie Annie Catherine Woitschek	<i>Iowa City</i>

SUMMARY

THE COLLEGE OF LIBERAL ARTS

Fourth Year	68	77	145
Third Year	65	52	117
Second Year	59	93	152
First Year	105	150	255
Special	42	20	62
Unclassified	90	104	194
Professional students taking elective work	44	1	45
	<hr/> 473	<hr/> 497	<hr/> 970

THE GRADUATE COLLEGE

Candidates for the degree of Ph.D.	25	2	27
Candidates for the degree of M. A.	37	33	70
Candidates for the degree of M. S.	15	6	21
Students not candidates for degrees	17	33	50
	<hr/> 94	<hr/> 74	<hr/> 168

THE SUMMER SESSION, 1906

Graduate College	43	29	72
College of Liberal Arts	77	104	181
College of Medicine	4	0	4
College of Pharmacy	6	0	6
Library Training School	0	18	18
	<hr/> 130	<hr/> 151	<hr/> 281

THE COLLEGE OF APPLIED SCIENCE

Fourth Year		
Civil Engineering	15	15
Electrical Engineering	4	4
Mechanical Engineering	1	1
Forestry	1	1
	<hr/> 21	<hr/> 21

SUMMARY OF STUDENTS

575

Third Year

Civil Engineering	14	14
Electrical Engineering	8	8
Mechanical Engineering	3	3
Mining Engineering	1	1
Chemistry	1	1
	<hr/>	<hr/>
	27	27

Second Year

Civil Engineering	18	18
Electrical Engineering	12	12
Mechanical Engineering	7	7
Mining Engineering	4	4
Forestry	1	1
Chemistry	2	2
	<hr/>	<hr/>
	44	44

First Year

Civil Engineering	29	29
Electrical Engineering	24	24
Mechanical Engineering	7	7
Mining Engineering	4	4
Forestry	4	4
Chemistry	2	2
	<hr/>	<hr/>
	70	70

Unclassified

Civil Engineering	12	12
Electrical Engineering	4	4
Mechanical Engineering	6	6
Forestry	1	1
	<hr/>	<hr/>
	23	23

Special

Civil Engineering	20	20
Electrical Engineering	13	13
Mechanical Engineering	7	7
Mining Engineering	2	2
Forestry	1	1

Chemistry	1		1
	<hr/>		<hr/>
	44		44
Professional student taking elective			
work	1		
Total			
Civil Engineering	108		108
Electrical Engineering	65		65
Mechanical Engineering	31		31
Mining Engineering	11		11
Forestry	8		8
Chemistry	6		6
Professional student taking elective			
work	1		1
	<hr/>		<hr/>
	230		230

THE COLLEGE OF LAW

Third Year	46		46
Second Year	55		55
First Year	79		79
Unclassified	11		11
Graduate	1		1
	<hr/>		<hr/>
	192		192

THE COLLEGE OF MEDICINE

Fourth Year	54	5	59
Third Year	46	0	46
Second Year	58	2	60
First Year	82	5	87
Special	5	0	5
Unclassified	12	3	15
Nurses' Training School	0	33	33
Summer Session	3	0	3
	<hr/>	<hr/>	<hr/>
	260	48	308

SUMMARY OF STUDENTS

577

THE COLLEGE OF HOMEOPATHIC MEDICINE

Fourth Year	4	0	4
Third Year	12	0	12
Second Year	13	0	13
First Year	14	0	14
Unclassified	1	0	1
Nurses' Training School	0	14	14
	<hr/> 44	<hr/> 14	<hr/> 58

THE COLLEGE OF DENTISTRY

Third Year	45	1	46
Second Year	82	1	83
First Year	57	1	58
Unclassified	11	0	11
Dental Assistant's Course	1	0	1
Graduate	1	0	1
	<hr/> 197	<hr/> 3	<hr/> 200

THE COLLEGE OF PHARMACY

Second Year	13	2	15
First Year	20	0	20
Unclassified	1	2	3
Practitioner's Course	6	0	6
Summer Session	5	0	5
	<hr/> 45	<hr/> 4	<hr/> 49
Total including duplicates	1666	827	2493
Duplicates	236	185	421
Total excluding duplicates	1430	642	2072

THE SCHOOL OF MUSIC (Affiliated)

Taking music exclusively	3	33	36
Total registration	4	69	73

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